CONTENTS

VOL. XXXV. GUELPH, ONT., JULY, 1923 No. 11

PAGE

Good-Bye (Poem) iv.
Canada's Immigration Problem 411
Hydro-Electric Power for Rural Districts 415
Greater Ontario 420
Agricultural Work in Honan, China 424
A Trip to Rondeau and Pelee 425
Farm Home Conveniences Exhibit 429
Editorial 430
College Life 433
Macdonald 436
Alumni 438
Locals 440

The O. A. C. Review is published by the students of the Ontario Agricultural College Students' Publishing Association, every month in the year.

Annual subscription price in Canada, $1.00; outside $1.50; single copies 15c. Advertising rates on application.

GOOD-BYE

Ralph Waldo Emerson

GOOD-BYE, proud world! I'm going home;
Thou art not my friend, and I'm not thine,
Long through thy weary crowds I roam;
A river ark on the ocean brine,
Long I've been tossed like the driven foam;
But now, proud world! I'm going home.

Good-bye to Flattery's fawning face;
To Grandeur with his wise grimace;
To upstart Wealth's averted eye;
To supple office low and high;
To crowded halls, to court and street;
To frozen hearts and hasting feet;
To those who go and those who come;
Good-bye, proud world! I'm going home.

I'm going to my own hearth-stone,
Bosomed in yon green hills alone,—
A secret nook in a pleasant land,
Whose groves the frolic fairies planned;
Where arches green the live-long day,
Echo the blackbird's roundelay,
And vulgar feet have never trod—
A spot that is sacred to thought and God.

O, when I am safe in my sylvan home,
I tread on the pride of Greece and Rome;
And when I am stretched beneath the pines,
Where the evening star so holy shines,
I laugh at the lore and pride of man,
At the sophist schools and the learned clan;
For what are they all in their high conceit,
When man in the bush with God may meet?

THE O. A. C. REVIEW
"THE PROFESSION WHICH I HAVE EMBRACED REQUIRES A KNOWLEDGE OF EVERYTHING"
VOL. XXXV. GUELPH, ONT., JULY, 1923 No. 11

Canada's Immigration Problem

By Robert J. C. Stead

Director of Publicity, Department of Immigration and Colonization

THE first fact to be grasped in a consideration of the immigration question is that Canada's development is inseparably interwoven with immigration.

All that Canada is to-day she is because of the immigrants who have come to her shores, and every white citizen is either an immigrant or the descendant of immigrants. Without immigrants she would still be peopled by the Red Man; her western prairies would still be the pasture land of the buffalo, and her eastern forests the hunting grounds of the aborigines. This fact is so self-evident that it needs only to be stated to be accepted, and when it is remembered that Canada, with one-sixteenth of the world's land area and probably more than one-sixteenth of its natural resources, has as yet only about one-half of one per cent. of the population of the world, the part which immigration is destined to play in the future development of the Dominion becomes apparent.

There are many reasons why the immigration question demands most careful consideration by the Canadian people. Perhaps the most immediate of these is the problem of supplying business for the more than adequate transportation facilities with which the country finds itself provided. There seems to be no difference of opinion among those especially equipped to speak with authority on this subject that the prosperity of the National Railways can be most effectively promoted by the settlement of the rich areas which they serve and by the production of business for their line, through the application of labor and capital to the natural resources of the country. Not less important is the part which immigration must play in meeting the national obligations of the Canadian people.

With a gross debt of approximately three billion dollars—not to speak of our provincial and municipal obligations—Canada is in the position of a manufacturer having a vast amount of raw material on his hands, but suffering from a shortage of labor and capital necessary to convert that raw material into liquid assets. The fact that there may be temporary or local problems of unemployment does not challenge the correctness of this general assumption. The gross national debt of the Canadian people is quoted at about $341.00 per head, and it is a simple arithmetical fact that if the population were doubled without increasing the debt the obligations per head would be just one-half what they are. That simple fact in itself lends a very practical interest to the question of immigration.

Just here it may be observed that the national debt of Canada, heavy as it is, is by no means to be regarded as paralyzing in these after-the-war days of unprecedented obligations. The

Canadian national debt per capita is only about forty per cent. that of Great Britain and only some forty-five per cent. greater than that of the United States, to use for comparison the two countries undoubtedly the wealthiest in the world. If national debts are compared with natural resources, the Canadian ratio is much smaller than that of either the United States or Great Britain. Natural resources, however, do not liquidate debts until after labor has been applied to them, and here again we are confronted with the problem of immigration.

Another reason why immigration is a problem pressing upon the Canadian people is found in the great disparity in density of population of the various countries of the world. Previous to the development of modern transportation facilities and modern means for the dissemination of information, density of population in one section of the globe had comparatively little import for other sections thousands of miles away. There was little interchange of commerce and less of people. The pressure of accumulated population gave no hint of overflowing the barriers presented by the problem of transportation, and the lower standard of living of the over-populated countries was not a menace to the higher standards possible in countries of under-population.

Now, all that is changed, and the crowded millions of Europe and Asia are nearer to us relatively than were the populations of the Central States in 1820; and as land hunger and their desire for self-betterment are almost elemental human passions, the proximity of great masses of population can no longer be left out of the reckoning. They are, in their possibilities, the most far-reaching of the influences which demand consideration in any study of immigration problems.

Notwithstanding the tendency of humanity to hive up in large cities there is also a continuous movement toward the levelling out of the density of populations, and this movement must inevitably prove a tremendous factor in shaping the destiny of Canada during the half century immediately ahead.

With a population of fifty-one persons to the square mile in Asia, one hundred and twenty in Europe, six hundred and fifty-eight in Belgium, about six hundred in England and Wales, three hundred and ninety in Japan, and thirty in the United States, any suggestion that Canada is to be continually occupied by somewhat less than three persons to the square mile, or that the Canadian population must permanently bear its present proportion to that of the other countries mentioned, is obviously absurd.

A sketch of Canada's immigration movement would be virtually a history of the development of the country. For many years it went on in a more or less undirected fashion, but about the beginning of the present century a very considerable degree of conscious effort began to be exercised upon immigration matters, and the flood of immigration increased until by 1913 the annual movement exceeded 400,000 persons. Out of this flood of humanity new to Canada, and perhaps also out of the experiences of the war, arose a conclusion that Canada's immigration efforts must be upon a distinctly selective basis, and this has become an established feature of the Canadian immigration policy.

The process of selection begins with selecting the country from which immigrants are to be sought and proceeds with the selection of the individual citizen of that country. The first step in this process is the creation of a desire on the part of that type of citizen likely to prove a good settler in Canada, to migrate to the Dominion. This is, broadly speaking, the publicity work of the department. It is pursued by a number of means; by advertisements in papers circulating among the agricultural and domestic working classes; by exhibitions of Canadian agricultural products at the agricultural fairs; by lectures on Canadian agricultural conditions and opportunities, and by the generous distribution of literature dealing with such opportunities; by motion pictures visualizing agricultural life in Canada; by articles in the press designed to promote a better understanding of Canadian conditions and, in some cases, a more sympathetic attitude toward Canada; and by such other means as prove available.

A peculiar and far-reaching phase of this publicity work is an effort to make Canada better known to the school children of the United States and Great Britain. This is being accomplished through supplying the schools with text books in which are maps of the Canadian provinces and pictures of Canadian scenes, and in which the truth about Canada is set forth in simple, straightforward language appropriate to the class room. The distribution of these text books runs as high as half a million copies in a year. They are supplied free to schools in the United Kingdom and the United States on the request of the school principals, and the demand is always greater than the financial resources of the department will permit it to supply. This is long range publicity work; it has to do with the rising generation, and its harvest may not be reaped for years, but it is spreading correct information about Canada and making the grotesque ideas concerning this country which have so long prevailed even among well-informed Britishers and Americans impossible in the rising generation.

Having created the desire on the part of the prospective immigrant to migrate to Canada, it becomes necessary to place at his disposal facilities for personal information and advice. For this reason immigration machinery, consisting of some eighteen offices in the United States and twelve in the United Kingdom, with a European office recently opened at Antwerp and sub-offices at other principal ports on the continent, has been established. At these agencies the prospective immigrant may learn further details about the country which cannot be very well set forth in the departmental publications; may inform himself as to the restrictions applied to immigrants and the conditions to which he must conform; may obtain information and advice concerning the movement of himself, his family and his effects; and may begin to arrive at a conclusion as to the portion of Canada in which he will locate.

If he belongs to the unacceptable classes he may also, through the medium of these agencies, spare himself the expense and disappointment of an unfruitful trip to Canada. There is little occasion for any immigrant experiencing the disappointment of being rejected at the port of entry in Canada if he has sought and been guided by the advice of the Canadian immigration officer in the native land.

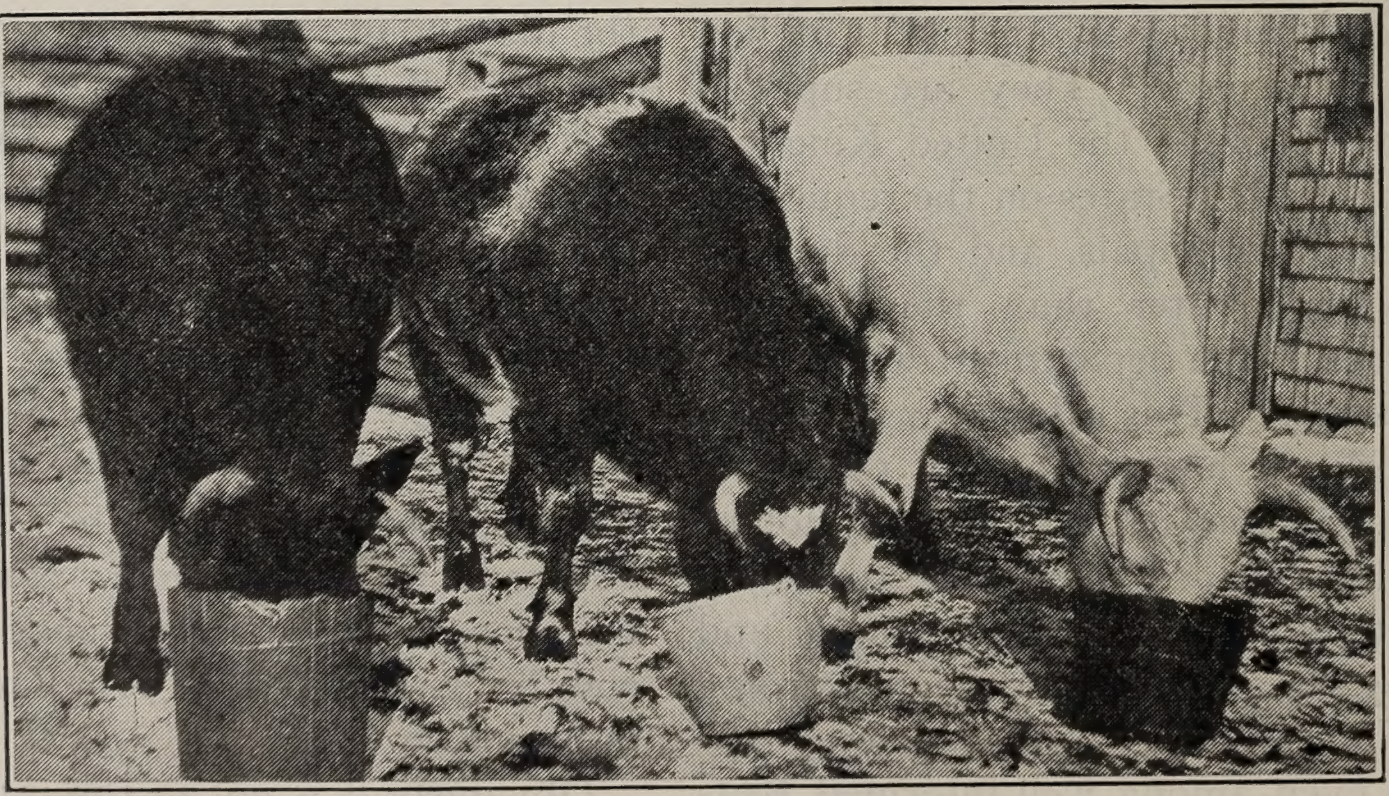
So much for the immigrant before he arrives in Canada and makes his start on the road toward Canadian citizenship. What becomes of him afterward? The assumption that the Canadian government feels no more concern for his success once he has landed in the country is founded on very incomplete information.

Obviously it is not in the interests of

Canada to encourage that type of immigrant which is going to lean unduly upon the Canadian government for support; the qualities of personal resourcefulness and sturdy independence are among the first requisites in new settlers and in the foundation work of a great nation. These qualities should never be impaired by over-paternalism, or by a generous or misguided disposition to pauperize.

When this has been said it must still be granted that among considerable movements of new settlers there are sure to occur individual cases calling for individual treatment, and if the histories of such cases could with propriety be made public they would go far to correct the opinion that the government of Canada has followed a "sink or swim" policy in dealing with its newly-arrived immigrants. The assimilation of large numbers of persons, some of them of foreign nationalities, most if not all of them more or less unfamiliar with Canadian conditions, is, however, perhaps the most fundamental problem facing the Canadian people.

It is a work which cannot be carried out exclusively by governments, either Dominion or Provincial, because assimilation is a personal process and has to do with the personal life of the people —not only of the immigrants but of those already resident in Canada. Assimilation, industrial and social, is the gauge by which immigration activity has to be regulated. The rapidity with which the Canadian people are able to assimilate the newcomer industrially, by which is meant enabling him to become self-supporting at useful employment, and socially, by which is meant incorporating him into the fabric of Canadian nationhood, is the rapidity at which the Department of Immigration and Colonization may proceed to obtain new immigrants to develop the enormous natural resources of the country still dormant, to assume their share of the nation's obligations, and to promote the prosperity, not only of themselves and of Canada, but of the world.

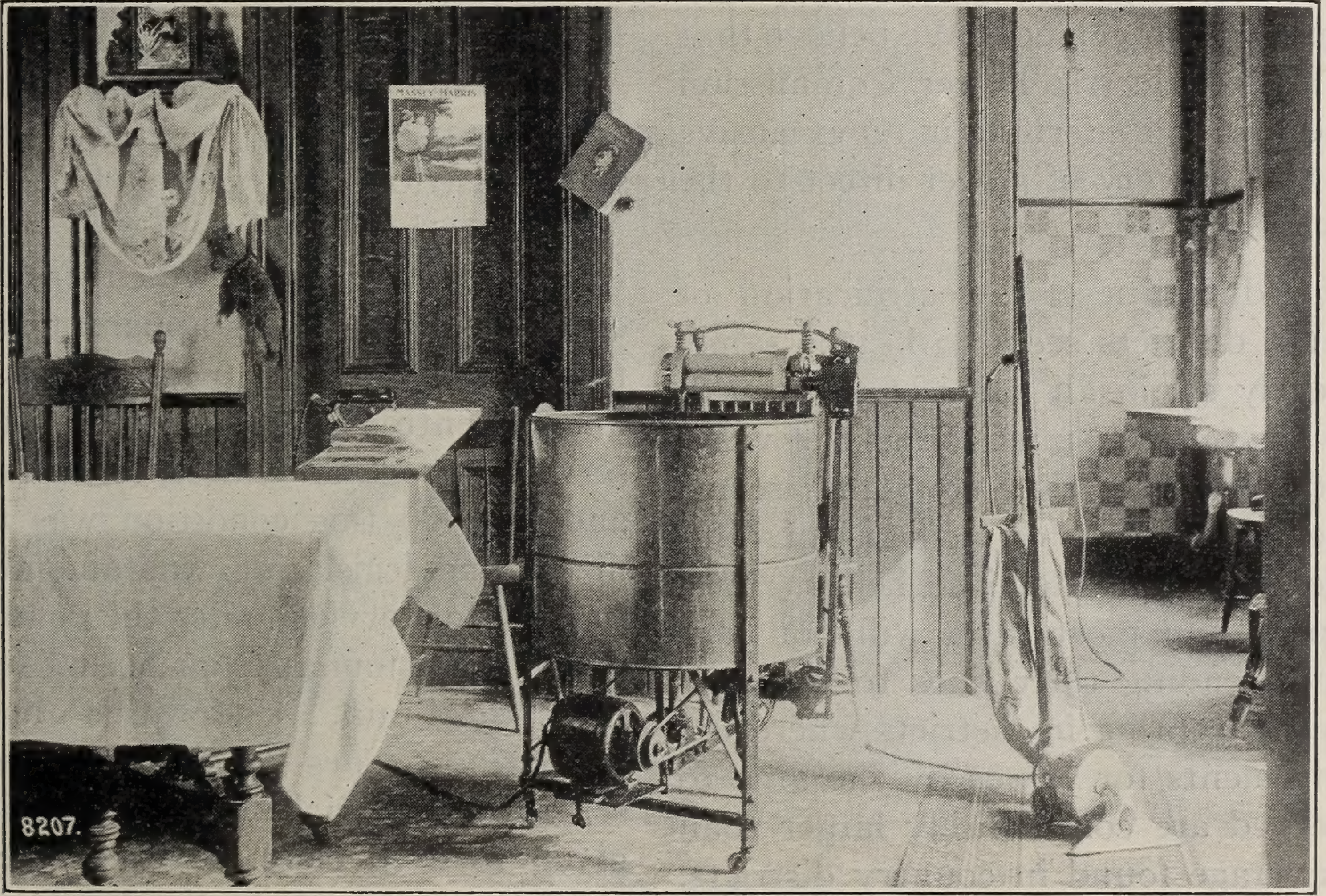


Hydro-Electric Power for Rural Districts

THE construction of high voltage lines through the country from the generating station to high tension stations and then to towns, cities and villages, as well as perhaps intercourse between farmers and their town friends, has probably been the cause of originating a desire in the minds of farmers and residents in rural districts for electric service. The Hydro-Electric Power Commission recognized this demand at an early date, and on its request in 1911, legislation was enacted to provide for such electric service to groups who petitioned for it. Under this legislation service in rural districts was supplied, as in towns and cities, at cost, under a contract between the individual and the township, covered by an agreement between the township and the Commission. These contracts and agreements are for the period of the debenture.

This method of giving service to groups had to be revised at a later date, on account of the apparent injustice which worked to the disadvantage of the man on the back lines of the township.

The demand for information and estimates has increased in about the same proportion as the growth of Hydro-Electric service in towns and cities.



Washing Machine, Electric Iron and Vacuum Cleaner

A study of the problem of distribution of electricity to country districts is being undertaken from a national point of view, by many countries on this Continent and in Europe, incited largely by the shortage of farm labor, caused by the great war which the world has just been through. The consideration in general by governments has been from the point of view of giving assistance to rural districts, either by long term loans to farmer companies, or bonusing of these companies. Some countries have now a system of this kind in use, all of them in Europe. Among them are France, Denmark and Sweden. The United States of America are at present working in conjunction with a large Electrical Association, with apparently the same object in view, but in most cases the problem has been viewed from the point of delivery of power from a delivery point to a receiving centre, and all distribution to be taken care of from that point to the individual, by a company arrangement. We believe that the Hydro-Electric Power Commission is the first to undertake in an extensive way the delivery of power direct to the individual.

The difficulties of electrification of country districts seem to be the same, or nearly so, in all parts of the world. This class of consumer, from the viewpoint of the electrical company, seems to be undesirable, on account of difficulties which are itemized below. The companies in most cases will not consider extending their lines to the consumer, excepting in districts where the requirements for power by the area to be served are considerably larger than the average found in country districts. In most cases such extensions have been made to serve intensive agricultural districts, or areas adjacent to lines that have been extended to suburban districts for the purpose of giving service to industrial plants outside of urban centres. In general, these difficulties are as follows:

(a) A small return on capital invested in distribution system and plant.

(b) Distance to be covered in rendering service and in operating the system, resulting in high operating costs per service.

(c) A small load per mile of distribution system.

(d) Low load factor, or small number of hours' use or demand by the rural consumer.

(e) Scarcity of power-using industries in the districts to be served, excepting perhaps in the case of those adjacent to the larger cities.

(f) The use by farmers of machinery larger than the work they do would warrant.

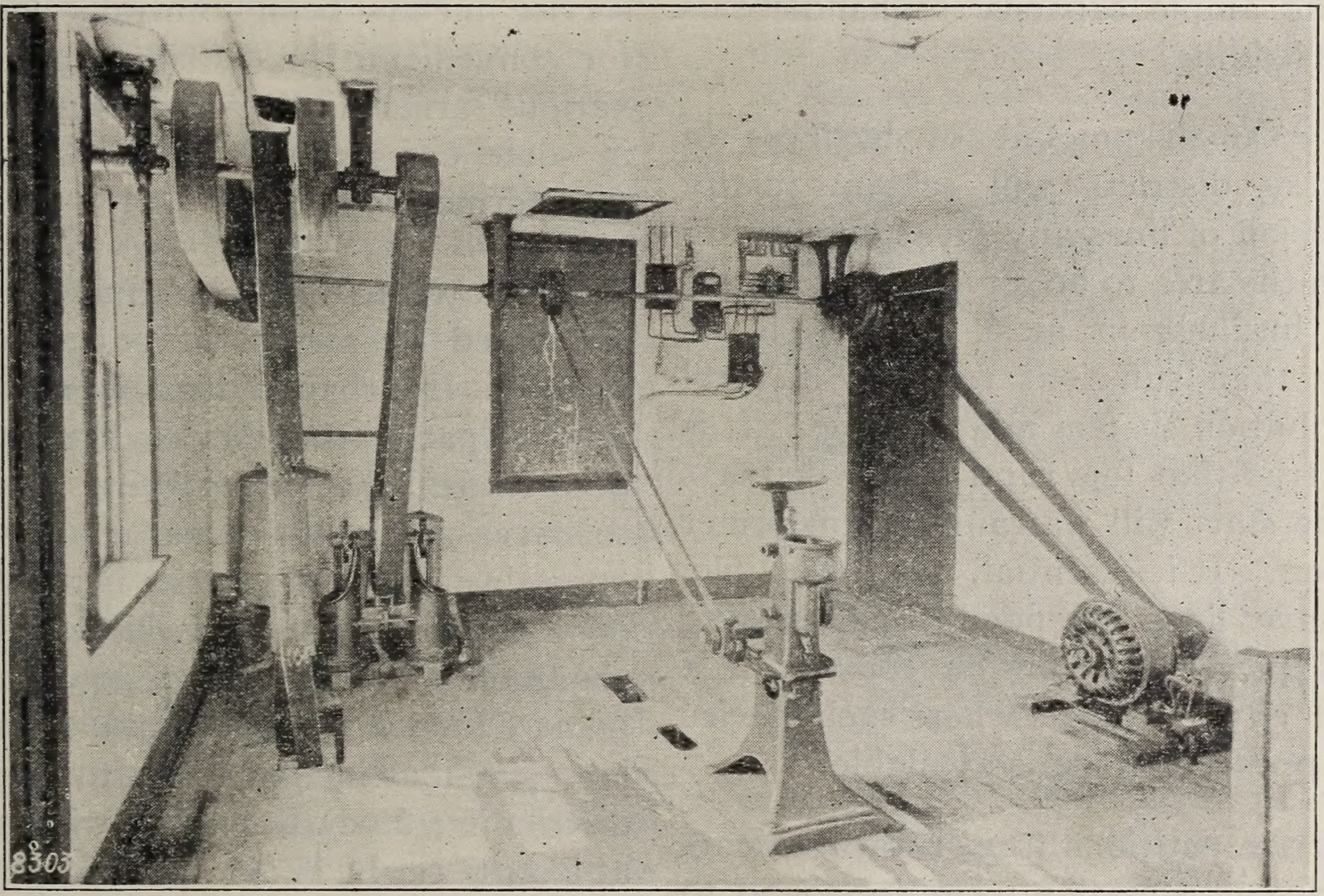
(g) Irregularity of demand, weather conditions being a factor in deciding when work should be done, resulting in the use of power by many at a time, when plant demand may be high in urban districts, by reason of the same weather conditions.

The 1911 legislation which was enacted to meet conditions apparent at that time, viz., requests from groups near urban centres petitioning for electric service, was found later to be unfair, and in 1920 this condition was recognized, and legislation was amended to provide for service under the conditions which were found, from actual experience, to obtain. Under this amended legislation, zones or districts are described, in which electric service is given to each class, at the same rate throughout the whole district, based on average conditions in the district. By these arrangements the geographical township boundaries are disregarded, the boundaries of the district being the line to which a distribution system could be extended from the distribution centre of a town, city or village economically.

In 1921 legislation was enacted providing for the bonusing of rural power distribution primary lines up to 50 per cent. of their cost.

The rural resident's conception of his needs in the way of electric service is confined at first to lighting, not realizing that his greater need is the use of a convenient power. To the latter service he must give the most attention, as it is from this use he can and will effect saving in labor, which makes the use of Hydro-Electric power on the farm profitable.

In order to overcome the difficulties previously referred to, closer attention must be paid to all the details of construction and operation of a rural power district than that of an urban centre. In constructing such a system such material and labor as can be secured locally must be taken advantage of. Load factor of systems can be improved by co-operation of manufacturers in the development of a better class of farm power using machinery, with perhaps smaller capacity, thus decreasing the individual demand for power, and extending the use somewhat. In this way smaller motors will be required than would be needed for the driving of the machinery found under average conditions as they exist to-day. The regularity of doing work by machinery will be a natural development, as rural distribution of power extends. The shortage of help will be supplanted to some extent by power in many ways, such as the use of mechanical milkers, automatic water systems, and conveniently arranged machinery, so as to minimize the handling of such produce as is to some extent manufactured for use on the farm.



Electricity in the Dairy

In many cases reports show that the improvements suggested effected a great saving in man-help per year. Uses of electric light and utensils in the house assist the housewife materially. Such service is stated by many to be equal in value to the whole cost of Hydro-Electric service on the farm.

Power-using industries in rural districts are found to be few, and most of them are industries which are found to a greater or less extent in all rural power districts, consisting of brick and tile yards, cheese factories, gravel plants, quarries, chopping and flour mills. Where power is supplied to industries in any rural power district, it materially assists in helping carry the annual charges on the distribution system of the district, thereby resulting in a lower rate to all taking service. It is seldom or never necessary to increase the capacity of the distribution system to serve them, the standard rural line having ample capacity to handle this extra loading.

The small amount of business in country districts will seldom justify extension of lines any great distance to reach the area to be served. The available business in most districts is no more than sufficient to carry a rural distribution system mile by mile. It is also true that few rural power districts at the start will warrant a transformer station. It is essential, where possible, to have lines extended from existing rural power distribution centres of a town, city or village, where such service at a proper voltage is available.

As the petitions from rural residents desiring information were not found to be a reliable basis in every case, on which to make estimates, a minimum business basis of a minimum connected load per mile, was used to arrive a an estimated rate, to those requesting information, the cost of power to be that at the distribution centre from which it is proposed to extend the line.

Distribution systems for country districts are designed to cover the defined zone around the distribution center from which such service lines would originate. The 236 towns, cities and villages on the fourteen Hydro-Electric systems are all potential distribution centres from which such systems might be or are being served. The voltage of rural systems is being standardized by the Hydro-Electric Power Commission at 4,000 volts "Y" connection, as far as possible. Main lines are usually three-phase, and branches single phase. The service voltage to consumers is 100 or 110-220 single phase, except in the cases of the heavier farm service classes, which are three-phase. Construction of service lines on consumer's premises is in all cases undertaken by him, the service meters being centrally located for convenience in distributing to the various farm buildings on his premises, in some cases this location being the transformer pole.

The rates to users in rural districts are based on service at cost, and the same, as in urban centres, is made up of two parts, the service charge and power cost; the former being designed to cover the annual fixed charges and operating costs, the latter in the form of a first and second kilowatt-hour charge based on the cost of power at the point of delivery. The tabulation below gives estimated cost to a rural district in a 25-cycle system, with power at 5 cents per K. W. H. for the first rate.

5c per Kilowatt hour for the first fourteen hours' use per month of customers' class demand rating.

2c per Kilowatt hour for all remaining uses.

Less 10 per cent. for Prompt Payment.

The following table gives class demand rating, average monthly kilowatt hours, estimated consumption charge, estimated service charge, and total estimated annual cost for each class:

Class	Name	Demand Rating K.W.	H.P.	Average Monthly K.W.H.	Estimated Annual Consumption Charge	Estimated Annual Service Charge	Total Annual Estimated Cost
1.	Hamlet Service: (a).........	½	⅔	10	$ 4 52	$ 17 59	$ 22 11
	(b).........	¾	1	15	6 57	20 50	27 07
	(c).........	2	2⅔	150	41 53	36 44	77 97
II.	House Lighting.............	1	1⅓	15	7 92	30 05	37 97
III.	Light Farm Service..........	3	4	40	21 60	60 82	82 42
IV.	Medium Single Phase Farm Service.................	5	6⅔	70	37 80	66 94	104 74
V.	Medium Three-Phase Farm Service.................	5	6⅔	70	37 80	84 50	122 30
VI.	Heavy Farm Service........	9	12	150	73 02	130 97	203 99
VII.	Special Farm Service........	15	20	300	137 76	188 90	326 66

Users of power in townships are required to contract with the townships and may choose, with certain limitations, from the following classes:—

Class I.—Hamlet service includes service in hamlets, where four or more customers are served from one transformer. This class excludes farmers and power users. Service is given under three sub-classes, as follows:—

Class I-A—Service to residences where the installation does not exceed six lighting outlets or twelve sockets. Use of appliances over 600 watts is not permitted under this class.

Class I-B—Service to residences with more than six lighting outlets or twelve sockets, and stores. Use of appliances over 750 watts permanently installed is not permitted under this class.

Class I-C.—Service to residences with electric range or permanently installed appliances greater than 750 watts.

Special or Unusual loads will be treated specially.

Class II.—House Lighting—Includes all contracts where residences cannot be grouped as in Class I. This class excludes farmers and power-users.

Class III.—Light Farm Service—Includes lighting of farm buildings, power for miscellaneous small equipment, power for single phase motors, not to exceed 3-Horse-Power demand, or electric range. Range and motors are not to be used simultaneously.

Class IV.—Medium Single Phase Farm Service—Includes lighting of farm buildings and power for miscellaneous small equipment, power for single phase motors, up to 5-Horse-Power demand, or electric range. Range and motor are not to be used simultaneously.

Class V.—Medium 3-Phase Farm Service—Includes lighting of farm buildings and power for miscellaneous small equipment, power for 3-phase motors up to 5-Horse-Power demand, or electric range. Range and motor are not to be used simultaneously.

Class VI.—Heavy Farm Service—Includes lighting of farm buildings and power for miscellaneous small equipment, power for motors up to 5-Horse-Power demand, and electric range, or 10-Horse-Power demand without electric range.

Class VII.—Special Farm Service—Includes lighting of farm buildings, power for miscellaneous small equipment, power for 3-phase motors from 10 to 20-Horse-Power demand, and electric range.

Class VIII.—Syndicates—Any customers with a contract in any of the foregoing classes may form a syndicate, provided the summation of their relative class demand will warrant permitting this to be done. The rates under these contracts are subject to annual revision and adjustment to meet the costs of service in the district. The classifications of services are designed to meet requirements of rural residents, from the experience of the Commission in giving such service extending over a period of years, and are made to fit all the classes that so far have been represented in applications for service.

(TO BE CONCLUDED IN THE NEXT ISSUE)

Greater Ontario

By A. G. Skinner, '24.

IN ADDRESSING the students of the Ontario Agricultural College recently, a speaker had occasion to mention Northern Ontario. The statements made seemed to be more or less prejudiced and the impression that is apparently left is that Northern Ontario is a rocky and barren area producing stunted Poplar and scrubby Jack Pine.

It is true that certain districts adjacent to the railway lines may present this view, but such districts are no criterion of what the country really is.

This article is an endeavour to give some idea at least of the extent of the country, as well as the great agricultural and mineral wealth to be found therein, but before going further let it be clear that it would be quite impossible to do the subject justice within the confines of a short article such as this. However, a brief resumé of the whole area will be given, and then a little detail on one particular district.

It is probably well known that the Province of Ontario is the second largest in the Dominion of Canada, being exceeded only by Quebec. It might also be interesting to know that Ontario is over three times the size of the British Isles and almost twice as large as France or Germany. But a fact that is too little appreciated by even those living in Ontario is that there is within the Province this vast territory known as Northern Ontario, but which some prefer to call Greater Ontario. It is four times the size of Old Ontario and far larger than Great Britain, France or Germany.

It is a large and for the most part undeveloped area of mining, lumbering and agricultural land, to say nothing about the marvelous hunting and fishing to be found.

This vast region includes all that part of Ontario north of a line commencing at Mattawa on the Ottawa River and running westward through Lake Nipissing and the French River to Georgian Bay, Lake Superior and along the United States boundary to Manitoba. Graphically it is divided into eight large districts which are, Nipissing, Sudbury, Algoma, Thunder Bay, Rainy River, Kenora, Patricia and Temiskaming. Mention will be made of each of these.

Starting with Nipissing, the gateway to the North, we have a district which has been very little developed as yet. It has a variety of soils and seems to be adapted to Dairying and Mixed Farming. There is an abundance of water with considerable water-power waiting development.

Sudbury, the second district, is the centre of Canada's greatest nickel deposits. Nine-tenths of the world's nickel is produced in Canada, and practically all of it comes from Sudbury. The largest nickel mine in the world, the Creighton, is twelve miles from the Town of Sudbury. The mines of the district are practically inexhaustible. Evidence shows that the tonnage in sight capable of economic treatment approaches 100,000,000 tons. There is now sufficient ore blocked out to pay the entire British debt of billions of dollars incurred in the Great War.

Next we pass through Algoma, which is traversed north and south by the Algoma Central Railway, opening up great areas of pulpwood country, which is underlaid by about 300,000 acres of the Great Clay Belt. This district is for the most part unsettled at present.

Coming to Thunder Bay we find certain sections of the country around Fort William and Port Arthur, which reminds one of the well settled parts of Old Ontario. This is especially true of the Slate River Valley and the Township of Oliver. It is a mixed farming, stock raising and dairying country. The district is also well wooded and lumbering is an important occupation.

Rainy River, too, has its share of rich agricultural land. Nearly a million acres of alluvial soil are to be found in the Rainy River Valley alone and splendid farms have been developed in certain parts, notably around Emo. Clover and its excellent growth make the district very suitable for live stock production. Large supplies of timber, capable of maintaining large pulp and lumber mills are also found in this district. It is estimated that over two billion feet of Red and White Pine are to be found between Fort William and Fort Frances.

In Kenora another great tract of good land lies between the lines of the C. P. R. and the C. N. R. Clover is the outstanding cash crop in this district. Some of the best clover seed of Ontario is produced here.

Out of the 330,000 square miles in Northern Ontario, the District of Patricia occupies almost half. This district alone gives Ontario a seashore of six hundred miles on James and Hudson Bays. But the most appealing interest centres about the fact that the Great Clay Belt extends far into the district, and to show that the climate is not too severe, let me say that garden and general farm crops have been grown with gratifying success at Moose Factory. White Pine, Spruce, Tamarack and other valuable varieties of wood are found everywhere and there is an abundance of available water-power. No section of Canada excels Patricia as a sportsman's paradise. Sometime in the future a great economic development may take place, owing to the fact that Hudson Bay may become a highway between Europe and the Canadian Northwest, since it can provide a seaport 1,500 miles nearer the prairies than can Quebec.

As yet, nothing has been said about Temiskaming. This district was chosen as the one on which to write more fully. The choice was made partly because it is probably better known to the residents of Old Ontario. This is especially true with regard to its agricultural possibilities, owing to the fact that the Great Clay Belt has been more developed in Temiskaming, perhaps, than in any other part of the North. This is the district which was recently the scene of one of the most terrible forest fires in the history of the North, in which the town of Haileybury and several villages were wiped out and scores of settlers and their families left homeless.

The phenomenal development of this district during the past twenty years was set in motion on the tenth day of May, 1902, when the Honourable F.W. (later Justice) Latchford turned the first sod of the right-of-way of the Temiskaming and Northern Ontario Railway at North Bay.

This event marked the consummation of a long struggle by men who for years had been urging the opening up and development of the North Country. The results of the project no prophet of old could possibly have foretold. The records of the gold and silver mines of the North read like fairy tales.

The railway was pushed with all possible speed and during the fall of 1903 was making its uncertain way northward as a mere colonization road when by a chance act a workman in preparing his evening meal—so the story goes—had occasion to move a stone together with some moss and disclosed a vein of pure silver. This was the beginning of Cobalt, which has not only astonished the continent as the richest camp of its kind but has reached world-wide fame.

Up to the present time the small area of four square miles has produced some three hundred and twenty million ounces of silver worth almost two hundred millions of dollars. Let me point out one mine in particular, the Coniagas, which occupies the small space of forty acres and has paid out in dividends over two hundred and thirty per cent. of its capital. Up to some three or four years ago Cobalt had produced on the average two and a quarter tons of bullion for every day since the discovery was made.

Further prospecting was done, and in looking for new silver fields native gold was unexpectedly discovered. Porcupine suddenly sprang into existence with the Hollinger, Dome, Schumacher and many other mines.

The Hollinger is undoubtedly the greatest gold mine in the world. Its only rival is the Moddersfontein of South Africa, which after operating twenty-three years had paid a total of about twelve millions in dividends. On the other hand, the Hollinger, after only eleven years' operation, now pays over three millions in dividends every year. This mine treats an average of over four thousand tons of ore every day, and this ore is worth from $8.00 to $8.50 a ton. Furthermore, on July 12th last year, Mr. A. F. Brigham, the general manager of the mine, in speaking at a banquet, said that there was nearly half a billion dollars worth of ore yet in sight.

The mines are the secret of the rapidity in national development, but farms are the source of a nation's stability and permanence. Northern Ontario has some sixteen million acres in the Great Clay Belt, and in sections of Temiskaming which have been settled we have some of the finest farms to be found anywhere. It is essentially a grass and grazing country, and thus is especially adapted to stock-raising. Timothy, Red Clover and Alsike make exceptional growths, while cereal grains and potatoes are grown with considerable success.

Anyone endowed with the vision to take up and enjoy the pioneer's lot may live a free and independent life and not be trammelled by too close urban proximity. Yet we are within five hundred miles of the very centre of urban life, as represented by Toronto, Montreal or Ottawa.

With a little attention shown to community settlements, establishment of good roads to connect the various settlements, establishment of rural schools, rural credits and social intercourse on comprehensive and progressive lines, there is no part of the Dominion that can vie with Ontario's great heritage to the north in building up a sturdy race.

A very highly colored picture of the North has been painted for you, but be reminded that we have our difficulties and very real ones they are. But the Spirit of the North is unconquerable and will attempt any obstacle. It is like unto that which is found in the west, one of utmost optimism. It is this same spirit which has enabled the country to survive three devastating fires and still press on.

When difficulties are mentioned, perhaps summer frosts and short seasons are the first that suggest themselves to your minds. However, these are commonplace with the Northerner and something which will be overcome through time.

One of the real difficulties is the holding of unimproved land. Vested rights must be guarded and protected by the law of the land, but sometimes these so-called rights are not rights at all. With justice rather than established law in mind, what right has anyone to hold unimproved land near centres of population or railroads while it increases in value by the very toil and hardship of others who must needs go farther back? The curse of the North Country is the land speculator.

We have other problems, for instance the road question, the school problem, but space will not permit the elaboration of these. However, with all these difficulties, we have a country with the Spirit of the West—yet without its extremes—a country with greater possibilities for stabilized agriculture than the West, and we are nearer the markets of the world. Some may say, "Go West, young man, go West," but I say "Go North, young man, go North."

Agricultural Work in Honan, China

A Report in "The Canadian Church Mission".

BY RUNDALL M. LEWIS, '21.

THE best angle from which to attack the question of agricultural work in this mission constitutes in itself a problem on which the prospective worker in a new field, such as we have in Honan, can find but little guidance in either the experience or the theories of workers elsewhere. Such matters as climate, rail and water transportation, kinds of crops being grown, general intelligence of the rural community, kinds and grades of existing schools, and the quality and numerical strength of the available teaching force are too variable for the results achieved in one centre to be an index of probable results elsewhere. And so, for us in Central Honan, the assistance lent from Nanking, Peking or from the findings of the China Christian Educational Association, can only be made use of in the most general way. It is, therefore necessary for us, so far as is possible, to review the conditions, digest the suggestions of others, and evolve our own programme, an ambition which the present paper does not pretend to accomplish.

With the already established work of the mission what it is, there have occurred to me in this connection several suggestions, any or all of which may possibly one day bear fruit.

(1) To introduce the subject of agriculture into an appropriate place in the curriculum of St. Andrew's School. To determine the appropriate place and to decide on what other changes should be made to make room for a new subject, still provide material for discussion; but it may be passed over for the present.

(2) To introduce the subject of agriculture in the form of applied Nature-Study into the Primary Schools throughout the mission, the first step being the training of the teachers of these schools in a special course provided in St. Andrew's School. When this course began to bear fruit in candidates for agricultural work in Middle School, already partly educated in agriculture, then, and not until then, might the subject of agriculture be introduced in the Middle Schools.

(In this connection it may be pointed out that the curriculum of St. Andrew's School as at present constituted is not adapted to the introduction of agriculture in any but the last year, and there, of course, for one year only. In my opinion, Nature-Study and an introduction to the natural sciences should be a prerequisite to any serious instruction in agriculture.)

(3) To attempt certain approaches to the farmer himself as, for instance, by talks in the villages, assistance in the control of insects and plant diseases. crop-growing competitions with selected seeds or nursery stock as prizes, and the direct distribution of seeds.

(4) To establish an experimental farm and possibly also a tree nursery, chiefly as an adjunct to class-room and laboratory instruction. If agriculture is introduced into the rural schools of the mission, a school garden and nursery, cared for by the pupils, should be a feature of each school. An experimental farm, properly managed, should result in a great increase in the productivity of the community it serves, but for itself cannot be a self-sustaining

institution. Ideally, it should be maintained by the people it benefits, but it is a question whether this could be done here.

(5) To work in as close co-operation as possible with the agricultural workers of Kaifeng Baptist College. In a letter to me, of December 11th last, Dean Reisner, of Nanking, writes:

"In view of the fact that you have a rather large Higher Primary and Middle School in Kaifeng, that you have ten or twelve country schools, that your schools are located in an agricultural area in every respect similar to the area in which the Kaifeng Baptist College is working—and because of this, your problems will be similar—Mr. Griffing, Mr. Buck and I feel very strongly that whatever is done along agricultural lines should be done in as close co-operation between your two institutions as possible. You will find that your man-power is limited, that your funds are limited, and that your aims are the same. . . . ."

(6) In conclusion, I feel that all the instruction given in agriculture, should be without exception, given in Chinese. It is only thus that it will be remembered, carried home and disseminated. It is only thus that trained teachers will absorb and then transmit a practical science. And it is, of course, only in Chinese that the majority of our rural community can receive it at all.

Kaifeng, Honan, Mar. 31, 1923.

A Trip to Rondeau and Pelee

BY F. MORRIS, PETERBOROUGH, ONTARIO.

With the Scientists on a Motor Jaunt Through Western Ontario

(CONTINUED FROM THE JUNE REVIEW)

ON THE very first day of camping we had discovered, at the south end of one of the park roads, a piece of swampy woodland close to the shore where a gale from the lake had levelled a number of trees; a score or more of these were lying on the ground or leaning toward it so heavily that the branches at their heads were in contact.

There were basswood, elm, maple, beech, and oak, besides an occasional ash, hickory or tulipodendron, and, at a little distance, white pine.

It proved an ideal place for collecting; it was on the edge of the wood and the sun fairly blazed the spot into a seething cauldron of ferment; on the lake side was a windbreak in the shape of a high bank fringed with trees. Experience showed that the best collecting hours were between two and four p.m. It was tremendously hot and the flies were simply indescribable. They made one's mouth fairly water for the halcyon days of King Pharoah and the Plagues of Egypt. But the activity of the Longhorns was an irresistible attraction. The basswood was the first tree to draw our attention and remained one of the best, but occasional finds were made on elm, maple, beech and oak, especially one large oak held well up off the ground by two or three of the main limbs. This condition has been borne in on me by invariable experience—trunks and limbs closely pressed to the ground, especially in a damp situation, are far less productive of captures than lean-to's or lodged trees with trunk and limbs that lift themselves or hang free in the air; mainly because it is the under side of trunk, limb, branch and twig that ninety per cent. of the beetles resort to.

The oak to which I have referred was in an excellent position, neither sunk in the ground at its base, nor sky-high at the crown. It yielded crops with tropical frequency, two or three times a day; the most coveted species, I think, was Artiopalus frelminans, a large black longicorn with numerous wavy bands of white pubescence which serve to conceal the ground colour by breaking it up; only the disc of the thorax is destitute, over its entire surface, of this diffusing white, so that it presents a shining black ground as of a tonsure. It is of the Clitini group and the bands of pubescence are very similar to those of the Locust Borer (Cyllene robiniae), only silver instead of gold. Prof. Baker and I got nearly a score of them. The closely allied Xylotrechus colonus was also abundant on this tree, other specimens of it being taken on beech and maple; one or two species of Lamiinid were also captured on this oak; Twographis fasciatus in abundance, occasional Goes oculatus, and an undetermined species of Lepturges.

A few days later in a wood east of Leamington I found some stumps and branches of newly cut oak, and these were frequented by several other species of breeding Longhorns, scores of Leptostylus macula, many Saurotes cyanipennis, and Leptura nitens, the last named always on the stumps and by preference skulking in the seams near the level of the ground where the bark was still moist with an overflow of sap; the stumps appeared to be most attractive when in sunshine, and the insects took to the wing very readily.

This wood was far the richest and most promising that we saw on our entire trip. Though not very wide, it stretched for a long distance and was intersected here and there by roads. As we approached in the car, we passed a tree of strange appearance; just what was peculiar about it, I don't think any of us could have said at first glance; but all of us at once and together remarked it, no doubt a case of that unconscious elimination of the familiar by which the mind works in field observations. It was something like an elm, yet obviously not an elm; the bark was very rough, but what doubtless caught our eye was a feature so conspicuous in the staghorn sumac, the characteristic set of the limbs and branches, which in this tree was horizontal. It was the Black or Sour Gum (Nyssa Sylvatica), a southern tree, and interesting as being our only Canadian representative of its genus in the well-known Dogwood Family. It was in this wood that Dr. Walker made one of his four Canadian records in the capture of the Smaller Sand Cricket. We found also several interesting shrubs, saw the Canada Lily in bloom, and got our first glimpse in Ontario of spikes of the Ragged Fringed Orchid.

To return to the fallen timber in Rondeau; it was the basswood that broke the record both for species and for specimens; Hoplosia nubila were in hundreds, Leptostylus macula and aculifer not infrequent on every tree we examined, always on the bark; on the foliage we saw dozens of Eupogonius subarmatus, and on both we took Saperda vestita. Saperda tridentata and Physocnemum brevilineum were both captured on the elm; and no less than two Saperdas were added to the not very long list of possible captures in this genus—two, I mean, that I had never taken before. I saw five specimens of Saperda lateralsi; three on basswood and two on elm; with a single exception they were all on the bark of the trunk, but one was resting on the foliage of the basswood. Felt and Jontel's monograph includes elm with hickory as a foodplant of this beetle. The rarest capture in this genus fell to Prof. Baker, who took a singleton of Saperda Viscoidea (male), a borer in the hickory.

The Lamiinids have all identically the same protective attitude in resting on the bark, and it throws an interesting sidelight on the problem of common descent that they are all so alike in correlation of parts, colouration and habits. One and all sit tightly appressed to the surface of the bark, often snuggling down into a depression, the legs drawn up to the sides of the body and the antennae flung straight back and lowered on to the wing margins or the slope of the thighs. Concealment is rendered almost perfect in the latter species like Septurges, Liopus and Hyperplatys, by the blending of the surface colours with the grey bark mottled with specks of neutral tint. They efface themselves so completely that long practice and the closest scrutiny are required to detect them; indeed, it is only when you begin to mistake little rust marks and freckles of weathered bark for beetles that you can claim to be anything of an expert.

The captures made at his spot have fairly bitten the scene into my brain—strong emotion acting like an acid to the sight-images on the tablet of the mind; and a similar effect may have been produced on others, for the narrow sandy shore proved a sort of Atlantic City or fashionable water-place for many species of Dragonfly, especially the genus Gomphus, a handsome form of the "mosquito hawk," in which the long narrow body tends to be racquet-shaped, being dilated horizontally at the tip. My own luck held to the last, for on bidding a final farewell to the spot, as I pushed my way through the branches and debris of a fallen oak, I noticed the sandy soil upheaved and half revealing a scaly cluster of clay-colored stems, like the mis-shapen sprouts of a coral-root orchid; next moment I was on my knees veiled in a cloud of predacious deer-flies, my body the prey of these tiny but ravenous fowls of the air, my spirit translated into its Botanist's Paradise of a new plant, absorbed in the contemplation of one of the strangest of our saprophytes, the Squaw Root (Conopholis Americana).

On Sunday, the 25th, we struck camp, motored to Leamington, and then down to the south end of Pelee Point. The flies at Pelee in June are as much worse than the flies at Rondeau as the flies at Rondeau are worse than the flies at every other place. To sand flies, stable flies, deer flies and mosquito flies were added shadflies in millions; they rose from the grass and shrubs in dense clouds and floated overhead in strato-cirro-cumulus banks or streamed out in the light evening breeze, warping and wavering across the sky like Milton's locusts; their exuvia lay on the shore for hundreds of yards, inches deep, feet wide, solid drifts of insect trash. Speak to a native about insect life in other places and he replies scornfully: "They ain't in it with the Point for bugs!" Attempt to argue with him perhaps at the breakfast table, and, pointing a defiant finger or pipe-stem at the coffee pot in your hand, he will tell you how often he could have filled it (perhaps has filled it!) with fleas or other vermin from hen house or pig pen; but he just gave them a dose of "skeeter-scoot" (or some other insecticide), and "There wasn't a flea left—no, sir, they flew!" If local feeling is patriotism in embryo, all's well with Pelee.

The wild doves, quails and cardinals were even more abundant here than at Rondeau, and it was an exquisite pleasure to hear their calls at various hours of the day wherever we went. We found the Fox Snake abundant in the damp thickets and the sand; it has the strange local name of "womper" and attains considerable size; the tail tapers very rapidly to a narrow tip some six inches in length. When excited, it vibrates the tail with extraordinary rapidity; in the sand this has the effect of scattering the particles of grit with an audible buzzing sound; it seems likely that the tradition of large "rattlers" in the neighborhood had its rise in this curious habit—doubtless a warning habit—of the Fox Snake.

The day after we reached the Point, Professor Howitt and I took a little botanical trip together. One of the first sights that greeted us was large patches of gorgeous yellow-flowering cactus (Opuntia Raffinesquii) in a sandy field at the roadside. From here we proceeded to the west shore which we followed south to the tip and then up the east shore and home across a prosperous fruit farm with vineyards and orchard.

While passing through the belt of woodland on our way to the shore we were struck with the number and variety of dogwood shrubs; an examination of these led to the discovery of at least two species that were new to us, the Rough-leaved (Cornus asperifolia) and Bailey's (Cornus Baileyi); it is always a pleasure, and no small profit, to add a new species to one's knowledge of any genus in the plant kingdom, and when you remember that we had found the Nyssa or Sour Gum, here were three new species added in a single trip to the Cornaceae, a family of less than ten members all told in the Dominion.

Hardly had we passed through this fringe of trees and bushes and gained the shore than we noticed some shrubs in the sand that looked for all the world like tall bushy plants of Poison Ivy. The leaves were trifoliate and not unlike those of Rhus toxicodendron in size, shape and colour; clusters of light green samaras winged all round were a characteristic feature, as its popular name of the Hop Tree shows (Ptelea trifolia); it is first cousin to the Prickly Ash

While I was examining one of these shrubs, I suddenly caught sight of a large glistening blob. I at once began to suspect this unshapely lumpish thing of being a caterpillar. Very gingerly I reached out one of my fingers and touched it; out shot brown-crimson horns of flesh and a peculiar sickly odour; it was the larva of the Giant Swallow Tail (Papilio Cresphontes). I found several smaller specimens on the same bush and two or three on other bushes. Holland mentions the Hop Tree as one of its food-plants, and there was in this a very interesting point, a striking coincidence that gave the botanist to think furiously. Ptelea trifolia belongs to the Rue Family, and you will find it treated actually on the same page of Gray, not only in an adjoining genus, but as the next species to the Rue, the plant on which Papilio arterias had laid its eggs outside the City of Guelph. Both plants contain the same acrid and aromatic oil, and the butterfly, in response to her sensations of what we call taste and smell, had confidently attached her eggs to a plant she could never have seen before; and her confidence had been fully justified in the vigorous growth of her offspring.

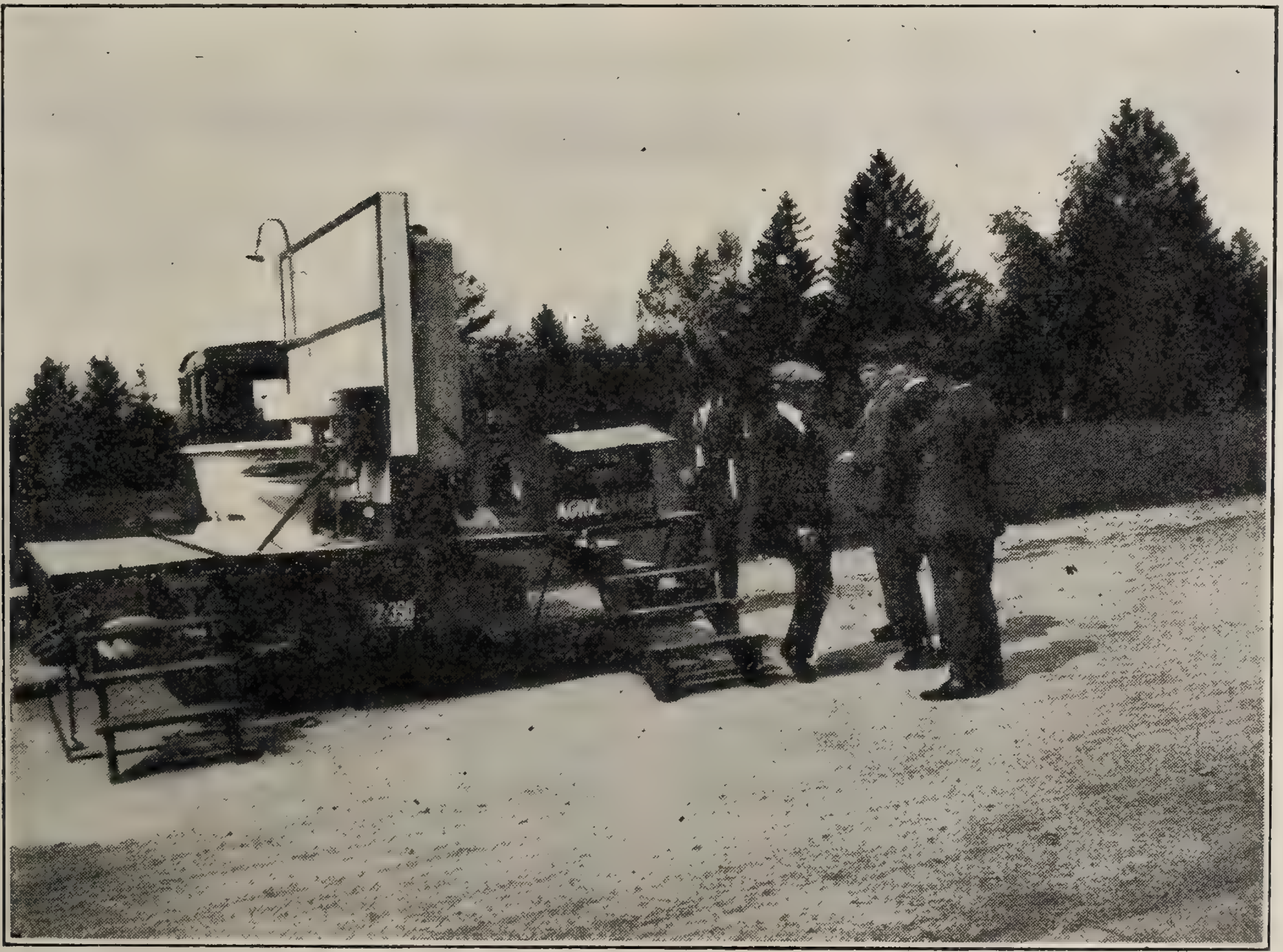
(Continued on page viii)

Farm Home Conveniences Exhibit

By R. R. Graham, B.A., B.S.A.,

Associate Professor of Physics, Ontario Agricultural College, Guelph, Ont.

THE Institutes Branch of the Provincial Department of Agriculture, under the direction of Mr. Geo. Putnam, has just recently equipped a motor truck with water systems, plumbing, bathroom and kitchen equipment, septic tank, etc., as a demonstration outfit to tour the Province of Ontario for the next few months. The purposes of this travelling demonstration are to create among the farmers a greater interest in modern conveniences for their homes, to give them information about the equipment and its installation and to assist them in solving their problems in this particular line of work. As the farmers, generally speaking, are very poorly informed on this subject, and very few can boast of having modern conveniences in their homes, a demonstration campaign of this kind is badly needed, and it is believed that the results will justify the effort being put forth by the Department.



The Demonstration Truck in front of Old Residence O. A. C.

The planning and actual installation of the equipment on the truck was done by Mr. Edwin Newsome, and he will have charge of the truck and give lectures and demonstrations at the various places on the itinerary. Mr. A. B. Cockburn, B.S.A., of Guelph, will accompany him as assistant. They started out from Toronto May 25th, holding their first demonstration at Clarkson. On Monday morning, May 28th, the truck was at the Ontario Agricultural College for one hour, and

(Continued on page x)

THE OAC REVIEW

REVIEW STAFF

MACKELLAR McARTHUR, '24, *Editor-in-Chief*
A. E. DAVEY, '25, *Associate Editor*

G. SKINNER, '24, *Agri.*
R. KEEGAN, '24, *Exper.*
A. A. HOLMAN, '24, *Hort.*
S. L. PAGE, '24, *Poultry.*
C. FAHRIG, '25, *Farm Power.*
H. PLUNKETT, '25, *Alumni.*
MISS E. McARTHUR, *Mac. Rep.*
J. MARSHALL, '25, *College Life.*
J. KELLOUGH, '25, *Athletics.*
L. S. KEMP, '23, *Locals.*
G. S. WALLEY, '26, *Art.*
O. E. CAMERON, '24, *Apiculture.*

EDITORIAL:

Our Opportunities at College

COLLEGE seems very far away during the holidays. We have slipped out of the little college world and are all, at least we presume all, busily engaged in some form of work. But in the back of every undergraduate's mind is the thought that with the coming of autumn he will be travelling back, to take part again in college life.

We should keep the thought of going back to college more in the foreground. We are often told, and we believe rightly so, that a large portion of our education is secured outside of the lecture room. This is the part of college which is ours. Here we can find things out for ourselves, individually or through the medium of our societies, the Philharmonic, the Literary, the Athletic, the REVIEW, and all the different clubs. We can make this phase of our life at college as interesting or as dull as we choose. The field is packed with opportunity.

No doubt the students who already hold executive positions are pondering over ways and means of livening up their particular society. We are too inclined to follow the path of our predecessors. Often it is wise to do so. On the other hand, it is occasionally well to strike out in a new direction. We should not be held in check too much by precedent. Our societies have met with a generous measure of success in the past, but they can be improved, made more interesting and more comprehensive.

As we see it, the great weakness with our part of college is that we get together as men far too seldom. Rarely in three years can we recall having been to a gathering that was not "mixed". We have no wish to eliminate such functions. They are very necessary. We do think, however, that a great deal might be gained if we had more "stag" parties.

One means would be to revive to life the long-defunct Alpha Literary Society. This society was inaugurated for the benefit of the second, third and fourth year. The Dephic Society helps the freshmen wear off their newness to the platform. The girls have their literary society, from which the mere male is debarred. If we can believe reports, the meetings are greatly appreciated.

It has been suggested that the Alpha Lit. take the form of a mock Parliament. We have complained that we need more practice on the platform and in thinking on our feet. Here is the opportunity. "Parliament" could sit once a week or once a fortnight, as decided upon. The idea holds many interesting possibilities. Simply preparing platforms would stimulate interest. The planks need not be of oak. Here are a few, of some unknown timber, that occur to us on the spur of the moment:

"That lectures be given to the accompaniment of music;

"That lecture rooms be provided with shaded and colored lights to give the proper atmosphere (for sleep);

"That the college adjourn each afternoon for 'tea-water' and sweet cakes, and so on. Some wonderful platforms could be advocated and debated on.

If we wish to get more out of college it is up to us to get busy. Some minor functions might need to be sacrificed without any appreciable hurt to college life. We have too many little affairs, which use up time and get us nowhere.

An Agricultural Field Day

Some time ago, a graduate who is well informed in agricultural circles suggested that we should have an annual plowing match at the college. The idea appears to be a good one. With the introduction of tractors and riding plows, a well-turned furrow is something of a novelty. Furrows that are merely flopped over, winding all over the lot, are everyday sights. Just what effect good plowing has upon the yield per acre we have never heard—good thesis subject—but the increase must be substantial. A well-plowed field works down more readily, giving a better seed-bed and better tilth.

These are days when the "practical" is heralded to the skies. To be able to plow well is certainly practical—'24 Ag. men please bow. If it were announced each spring that a plowing match would be held in the fall, think of the effect upon the country! Students everywhere getting back on the old farm, seeking to become proficient "pleughmen" that they might compete for the cup in the fall. A nucleus for better plowing would be established in each community.

Even the faculty might become interested. An event for professors only could be part of the day's programme. Students, of course, would not be allowed as spectators while this event was in progress.

An annual plowing match would also be a good advertisement for the college. Farmers everywhere would be interested. It would be something they could understand and appreciate. Even today many farmers believe that O. A. C. men know very little about real farming.

It would be well not to commence with too ambitious a programme, leaving out the fancy events and just striving for good "farmer's" plowing.

The incoming fourth year, Ag. option, demonstrated last fall that they knew what the ancient implement was for. Probably '25, '26 and '27 would unearth some real plowmen. What do you think of the idea?

One Professor's Views on Education

The American professor deals with his students according to his lights. It is his business to chase them along over a prescribed ground at a prescribed pace like a flock of sheep. They all go humping together over the hurdles with the professor chasing them with a set of "tests" and "recitations," "marks" and "attendance," the whole apparatus obviously copied from the time-clock of the business man's factory. This process is what is called "showing results." The pace is necessarily set by the slowest, and thus results in what I have heard Mr. Edward Beatty describe as the "convoy system of education."

. . . .

The excellence of Oxford, then, as I see it, lies in the peculiar vagueness of the organization of its work. It starts from the assumption that the professor is a really learned man, whose sole interest lies in his own sphere; and that a student, or at least the only student with whom the university cares to reckon seriously, is the young man who desires to know. This is the ancient mediaeval attitude long since buried in more up-to-date places under successive strata of compulsory education, state teaching, the democratisation of knowledge and the substitution of the shadow for the substance, and the casket for the gem. No doubt, in newer places, the thing has got to be so. Higher education flourishes in America chiefly as a qualification for entrance into a money-making profession, and not as a thing in itself. But in Oxford one can still see the surviving outline of a nobler type of structure, and a higher inspiration.

. . . .

The trouble is that the universities on our Continent are just waking up to the fact of what a university should mean. . . . .

The real thing for the student is the life and environment that surrounds him. All that he really learns, he learns, in a sense, by the active operation of his own intellect and not as the passive recipient of lectures. And for this active operation what he really needs most is the continued and intimate contact with his fellows. Students must live together and eat together. Experience shows that that is how their minds really grow.

—From "Oxford As I See It," by Stephen Leacock.

We are indebted to the "Farmer's Advocate" for the use of the cuts on Pages 414, 423 and xx.

COLLEGE
·· LIFE ··

Ex-Members of College Battery Hold Re-Union

THE OLD campus never looked nicer than it did on June 9th, when ex-members of the College Battery (56th C. F. A.) foregathered on the Hill for a week-end reunion. The 56th was recruited in March, 1916, from students and graduates of the O. A. C. and their friends. After several months' training at Guelph and Petawawa, the big artillery camp on the banks of the Ottawa, the Battery went Overseas. Eleven months were spent in England, during which time the 56th established a shooting record for the division on the ranges at Salisbury Plains. However, the unit was broken up during the re-organization of the Canadian Artillery early in 1917. One-half of the 56th went to the 55th Battery and the other half to the 66th, a Montreal unit. These two batteries served with the Fifth Division as Corps artillery from August, 1917, until the Armistice, altogether fifteen months of action. After the cessation of hostilities, both batteries went to the Rhine in the vanguard of the occupational forces.

The reunion of the ex-members of the 56th was quite an informal affair, and was all the more enjoyable on that account to men who had seen all the formality they wanted while in the army. Between seventy and eighty men turned up from all parts of the Province, in cars and by rail, and a number of letters and telegrams were received from others who were too far away to attend in person. Saturday afternoon was spent in a hotly contested baseball epic, during which nearly every one present took a turn on the field at one time or another. Tired players resigned their places to newcomers and joined the cheering throng of spectators loafing under the shade trees. By this system of rotation everyone was in good shape for supper when the cookhouse call was sounded and the troops took possession of the Dining Hall.

An informal dance was staged in the gymnasium by a few energetic devotees, a number of girls from the Hall gracing the event by their presence. Most of the boys, however, preferred to lounge around on the big Chesterfields in the Mills Hall common room and swap yarns and reminiscences of the old days of campaigning. With Renwick at the piano and Bill Kay manhandling half-a-dozen drums at once, the gathering soon caught up the old army songs and roared them out lustily into the small hours.

Sunday, as the day of rest, found the gunners and mule-skinners content to loaf around on the campus, basking in the sun or cooling in the shade as inclination dictated. Groups scattered to look over the prize stock and elegant piggeries and other attractions, with the unfortunate exception of the wax fruit, which were barred from public gaze. After lunch cars began to fill up and pull out for parts unknown, and the rest of the day went in handshaking and farewells. Altogether a very pleasant meeting, and one that it is hoped will be repeated again before the prosperous ex-artillerymen get too fat to come and the others too poor.

Twenty-Three Says Au Revoir

It was with mixed feelings that the residents of Mills Hall viewed the dawn of Friday, May the eighteenth. For four long and joyous years we had looked forward to the day on which we would write our last examination at the old O. A. C. and the time when we might sally out into the world of work and try our strength.

Yet it was not altogether a day of pleasure. That final exam. in Climatology exerted a most depressing effect up till about eleven o'clock, when the post-mortem fiends held their last session and, for the umpteenth time, decided that, after all, they might possibly scratch up a pass mark. The sight of our neighbor's luggage, all packed and ready to depart with him on the morrow, reminded us that the close of our college course meant parting with companions of four years' standing. Even our old chemistry note books brought back fragrant memories as we reluctantly tossed them into the waste basket.

However, it was a bright, sunny May day; we had a banquet and a dance ahead of us, so the more cheerful thoughts prevailed. At high noon, Mac Hall dined in solitary state while we restrained our appetites and thirsts as well as possible till one-thirty. The girls were lonesome. They frankly admitted it and an invasion of Year 23's stronghold—yea, even to the third floor—was one result. Fortunately, there were no casualties, though some of the defenders were forced to retire ignominiously and somewhat hastily to their dugouts. Then, before we could get into the dining hall came that business of running the gauntlet. Girls to the right of us, girls to the left of us, arms—well, all over the place. Even the Honorary President got his hair mussed. Unfortunately, President Reynolds arrived too late to get in on that part of the fun.

Came the dinner. We enjoyed it. Miss McKiel and her staff made our last dinner a thing to remember. Some of us still have daffodils which graced the tables on that occasion. Real coffee for dinner! The traditions of the dining hall were so upset that even the upward curling smoke from after dinner cigarettes brought forth no protesting groans.

Prof. Blackwood, as chairman, confined his speech-making to short remarks anent the other speakers, but he did favor us with two splendid solos. President Reynolds reminded us that there were still some things we did not know and mentioned the value of postgraduate work. His belief in the future of agriculture, both professional and practical, gave a cheering thought for those of us who could not clearly see their future path. A humorous recitation of one of Drummond's habitant poems by Prof. Harry Holgate was greatly enjoyed. Reg. Balch gave one of his characteristically clever and witty speeches, and read a letter from Dr. Creelman, who had been unable to accept an invitation to be present. Fred Presant, Roy Richmond, Frank Jones and "Dad" McCallum contributed short and timely words. Twenty-three will do well to remember the advice of "Old Joner" that while we enjoy the distinction of being the largest graduating class in the history of the O. A. C., quantity is not enough, and the year's reputation will depend on the *quality* of the work that we do as graduates. "Think it over!" We left to get ready for the dance.

There have been many dances in our four years at College. Some of these are almost forgotten, but none of us is likely to forget that farewell dance on Friday, May the eighteenth, 1923. For the last time we dallied under The Well at the Hall, heard the clamor of the gong, and watched till She stepped down from the realms of darkness above. For the last time we joined in the procession to the gym. and went through the regular programme of parking our hats in the corner, waiting at the stage door, exchanging fox-trots and finally stepping gaily off with the notes of the first extra.

The decorations were novel. Flowers as usual, but—do you remember that string of '23 pennants; the green flag and the bannister remnants that recalled the Seventeenth of March? Why dilate on the dances themselves? There were fifteen, you remember. Perhaps you spent some of them outside; if so, no one smiled, for the night was a perfect one. At any rate, most of the crowd were on deck when the confetti appeared and each of us undertook to see that everyone else got a share.

College dances would not be such without Mrs. Fuller, Mrs. Reynolds and Mrs. Galbraith, all of whom were present on this occasion. Neither would it be a Year '23 dance without Prof. and Mrs. Blackwood, who came to enjoy the farewell party. President Reynolds also came in later in the evening and smiled his approval from the sidelines.

However, play cannot last indefinitely. The pleasures of our college course cannot last forever, neither can our dances, but of both the memory will linger. So it chanced that early on Saturday morning the long procession of twos wended its way, as similar processions have done often in our four years here, from the gym. to the friendly steps of Macdonald Hall.

And if that procession moved just a little slower, if the twos were just a little quieter, if the lingering at the Hall was just a little longer than on any other occasion, who shall say a word, for it is not every day that Year '23 says its farewell to the O. A. C.

—'23.

When Greek Meets Greek

At 11.45, Saturday, May 26, two Guelph Street Cars collided with great force at the switch near Johnson's Boat House on the Dundas Road.

The first to emerge from the wreck was Miss Plant, of the Bacteriology Department, and "Botanical Dick," holding Miss Bella Miller, of the Dairy Department. Miss Miller was somewhat seriously injured in the knee, arm and hip. Miss Hood, of the Agronomy Department, and Miss Plant were also badly shaken up.

In the college bound car, several women were injured about the head and face, while Dr. Zavitz, Prof. Le Drew and Prof. Marcellus showed they had received the benefit of the jolt.

The accident was apparently not the fault of either motorman. Both cars looked worse than the Toonerville Trolley.

MACDONALD

Oh! Sugar

By M. Barbara Smith, '19.

◆

HOW many kinds of sugar are you acquainted with?

Lump sugar, granulated sugar, brown sugar, icing sugar, maple sugar —I can't think of any more just now, can you?

Chemically considered, these are all one and the self-same sugar, known as sucrose, or cane sugar. It is found, highly diluted, in the form of a thin juice, circulating through the framework of various plants, most abundantly in the sugar cane, the sugar beet, the sorghum and the maple.

You all know what "sugaring off" means! The juice is boiled and boiled until all the water has evaporated, and the sugar crystal is left. Of course it has to be refined and purified to make it white, and remove all flavors except the actual sweetness. Brown sugar and maple sugar are not fully refined, and retain characteristic flavors. A portion of the syrup always remains uncrystalizable; this is molasses in one case, and maple syrup in the other. The syrup from the sorghum has a stronger taste than the true cane molasses, and very little sugar is made from this source, as it crystallizes with difficulty.

Sucrose is a compound of carbon, hydrogen and oxygen combined in certain proportion. The smallest imaginable portion of sucrose, called a molecule, is made up of twelve atoms of carbon, twenty-two atoms of hydrogen and eleven atoms of oxygen. The two last are in a proportion to form water, the molecule of which is composed of two atoms of hydrogen and one atom of oxygen.

Sugar burns very easily, because when the water is evaporated by heat, there is nothing left but pure carbon. Just try it!

This fact makes it a most valuable source of energy, which is produced in the body by the slow burning up of food. Nothing will dispel fatigue and furnish energy more rapidly than sugar, either eaten, or dissolved in liquid such as water, coffee or tea.

Well, then, the more we take of it, the better, it would seem!

Not so; do not jump to conclusions like a hop toad.

Sucrose, being a highly concentrated sugar (we will talk about some other sugars presently), has an irritating effect upon the delicate lining of the stomach, as well as the mucous membrane of the mouth.

Haven't you sometimes eaten candy until your mouth was sore?

Grocers and others who handle sugar freely, are often troubled with an inflamed condition of the skin, caused by this property. An overdose of sucrose causes the stomach to produce a highly acid juice, and an unusual quantity of mucus, both of which interfere with the proper digestion of food. A moderate amount will simply slow down the digestive process, and make the meal last longer, preventing the too early recurrence of hunger.

Another bad effect of too much sugar is the decay of the teeth, caused partly by acids formed in the mouth, which eat away the enamel.

Sucrose is a double sugar or di-saccharid. The other di-saccharids are malt-sugar and milk sugar, both of which are less sweet, less irritating, and more easy to digest. But all double sugars must be split up chemically into simple sugars or mono-saccharids before the body can make use of them. Certain ferments present in the digestive fluids carry out this process.

But the simple sugars are found in fruits, honey, vegetables and cereals. These are the best and most natural forms of sweet food.

The love of sucrose is an artificial and almost a depraved taste, similar to the taste for alcohol or tobacco. Very young children do not care for it, being accustomed to the mild sweetness of milk, but they easily develop a fondness for it. Why encourage this? Why teach them a bad habit?

If sugar is given at the beginning of a meal, as with cereal, it produces a false feeling of satisfaction and destroys appetite before the needs of the body are really met, so that less is eaten of those plain foods which supply the blood with valuable minerals (such as lime and iron) and anaemia and poor teeth may result. This is clearly pointed out by Robert Hutchison, the great English authority on Dietetics, and by the German scientist, Bunge.

The only time when candy—artificial sweets—may be safely taken is AT THE END OF A MEAL. If indulged in between meals, "it is not only likely to disturb the normal appetite, but seriously to upset the digestion." (Mrs. Swartz Rose, Ph.D.)

Some day when the prohibitionists have got rid of alcohol, or, better still, have educated people up to the point when they no longer desire it, they will "go for" the candy manufacturer; in the meantime, let us do what we can to discourage the unnecessary, costly and harmful consumption of artificial sweets.

How many chairs, and saucepans, and dishes, and window curtains for the home could be bought with the money wasted on candy?

Oh, boys and girls, think of it!

—From The X-Ray.

A Stomach's Diary

"10.00 A.M.—Oh, dear! Another warm day. Wonder if I'll be abused as I was yesterday. If I am, I'm going to strike. Just disposed of a half-chewed breakfast. We ran for the train, which meant I was so jiggled about and so tires that it took me twice as long to do my work. Hope she gives me an hour or two of complete rest before anything more comes my way.

"10.30 A.M.—Two glasses of ice-water have just arrived. It will take all the energy I can pump up in the next hour just to warm me up to normal again.

"10.50 A.M.—Half-chewed breakfast did not satisfy her and she has bought some peanuts and started again.

"12.00 P.M.—Peanuts have been drifting along steadily ever since. Think she has finished them, too.

"12.30 P.M.—Decided she wasn't very hungry, and instead of a good solid dinner sent me down a cold egg-

(Continued on page xx)

Deaths

'15—The many readers of THE REVIEW will be sorry to learn of the death of Frank C. Donald, which occurred on May 17th, following an operation in the University Hospital at Philadelphia. He was a member of Class '15 and after graduating, he served Overseas with the College batterv. He was held in very high esteem, not only in his own community, but also by his fellow-students, and by many others whom he met in other walks of life. The funeral, held at his home, Wyoming, Ontario, was very largely attended, many ex-students of the O. A. C. being present, and the numerous wreaths of flowers offered a silent testimony to his memory. Besides his parents, brothers and sisters, he leaves to mourn his loss his wife, a graduate of Macdonald Institute, and little daughter. To these we extend our sincerest sympathy.

'15—The death of John T. Wilson occurred February 17th, 1923, in his thirty-sixth year. The immediate cause of death was pleuro-pneumonia, following an attack of the flu. Deceased had been ill for about three weeks and, with his brother, who had also contracted pneumonia, was brought to the hospital. He was the eldest son of Mrs. Robert Wilson, and was born in Kerwood. When eight years old he came with his parents to Enniskillen. He was a highly respected young man and until the church in his district closed had been an active church and Sunday School worker. He was one of Lambton's most prominent bee-keepers. He leaves a sorrowing mother to mourn the loss of an affectionate son, two sisters, Mrs. Gordon Randall and Miss Reta Wilson, also one brother, Will.

Marriages

'20—MASON-MCINTOSH—The marriage took place at Stirling, Ontario, on May 31, 1923, of Miss Lera McIntosh, daughter of A. D. McIntosh, '09, to Mr. H. C. Mason, '20, son of T. H. Mason (a member of the original class of 1874).

Miss McIntosh was a member of the Homemakers' Class of '21, Macdonald Institute, and the Dean, well, everybody at College knows him. Perhaps we suspected why the light over the Dean's door was out occasionally, perhaps we didn't. Congratulations and best wishes from THE REVIEW on behalf of all O. A. C. students.

'21—MCARTHUR - DAY—On Thursday, June 28, Miss Dorothy Day, daughter of Prof. and Mrs. G. E. Day, of Guelph, became the bride of D. C. McArthur, son of Mr. and Mrs. Peter McArthur, of Appin, Ontario.

Miss Day graduated from Macdonald

Institute with '18, and is deservedly popular at the College and in the city. Dan graduated from the O. A. C. with '21. He is at present in charge of the agricultural page of The Farmers' Sun.

'22—CLIVE-WIGGIN—On May 23, the marriage took place in Hamilton of Miss Wiggin to Court Clive, of Guelph.

For the past year Court has been with the Chemistry Department, O. A. C., engaged in research and extension work.

'23—SANDERS-HANNIGAN—On June 11th, the marriage took place of Miss Mary Hannigan, second daughter of Mr. and Mrs. T. J. Hannigan, Guelph, to Mr. Paul Sanders, son of Mr. and Mrs. E. L. Sanders, of Ottawa.

Mr. and Mrs. Sanders will reside at 811 Carling Avenue, Ottawa.

Come on, '23, how about following a good example?

'21—A recent letter from Rundall M. Lewis brought with it the article on mission work in China, which appears in this issue. Mr. Lewis is at present teaching English in St. Andrew's, Canadian Church Mission, Kaifeng, Honan, China.

'23 News

DAIRY

J. Chisholm is with the Model Dairy, Guelph.

N. Blaney is with the Dominion Department of Agriculture, Dairy Branch, testing butter for moisture.

I. Stothers is in New Liskeard with a government creamery.

A. G. Beatty, S. G. Collier, H. Nichol and W. B. Silcox are on cream grading work in Saskatchewan and Manitoba.

H. N. Sneyd is with Royal Ice Cream Co., Guelph.

G. E. Bennett is on the staff of the Detroit Creamery.

H. G. Williams is Assistant Butter Maker at the Dairy Department, O. A. C.

J. W. Dobie is Creamery Instructor for Western Ontario, London.

POULTRY

Mutrie, Fraser, Barron and Marston are with O. A. C. Poultry Department.

F. B. Hutt—Poultry Department, Manitoba Agriculture College, Winnipeg.

HORTICULTURE

J. F. McGiffin is on Extension Service of the Horticultural Department of Province of Ontario.

F. Presant is with the O. A. C. Horticultural Department.

APICULTURE

E. J. Dyce is with Apiculture Department, O. A. C.

Roy Richmond is with the Ontario Honey Producers Co-Operative Association.

'24—To quote from a letter from Dick Lane, "This spring I reforested in Norfolk, Perth, Durham, Northumberland, Grenville, Dundas and Simcoe Counties. I started to-day to make a detailed soil and forest survey of the Counties bordering on Georgian Bay. I have a car and one assistant. It is going to be very interesting work mapping in every bit of woodland. I am mapping in all waste land so that the department will have data to go by in recommending municipalities where to reforest."

'24—George Paterson occasionally drops in the editorial office on the farm. He is assisting R. H. Abraham, Agricultural Representative for the Indian Reserve with headquarters at Chatham. Pat has charge of the Indian soldier-settlers for the summer.

THE TRUTH WILL OUT

WHEN lovely woman stoops to breeches,
And finds too late that breeks betray
That she'd have to rely upon pleasant speeches
To stop a pig in an alleyway—
What can the pained observer say?
Here's for the truth, however it hurts—
Some had better go back to skirts.

When lovely woman stoops to breeches,
And finds too late that breeks betray
How very near each knee to each is,
Because—because they're built that way—
What can the pained observer say?
Here's for the truth, however it hurts—
Some had better go back to skirts.

When lovely woman stoops to breeches,
Slender and straight and young and gay,
Sweet as a ripe Niagara peach is,
Fresh and bright as a morn in May—
What can the pleased observer say?
Here's for the truth—and out it blurts—
I hope some NEVER go back to skirts!

* * *

Not Marbles

A poker game was in progress in the back room of the little hotel. A mild little man came in and took a vacant chair at the table. The game re-commenced. The little man looked around timidly, and asked:

"Are you playing for keeps?"

Someone threw a chair at him. He never knew.

Some Jane

There was a young lady named Lizer
Who ate oats as a first appetizer,
Then steaks cut from whales,
And potatoes in pails—
For she was a real gormandizer.

* * *

Just Out

Maiden's Lane—"Have you read 'Beyond the Pale'?"

Grub Alley—"No, who's it by?"

Maiden's Lane—"Henrietta Nonion."

* * *

A Law Realized

The economist..
Who said..
That one's desire..
For a good..
Diminishes..
As..
It becomes..
More plentiful..
Was right..
We just ate..
Three dishes..
Of ice-cream..
That would have wasted..
If we hadn't,..
Oh!..
That it had!..
Ugh!..
Where's the stomach-pump?..

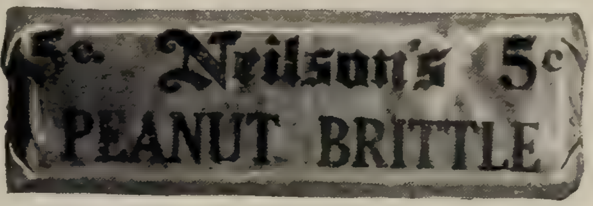
* * *

Ever Thus

'24—"How are you getting on with your thesis?"

Ditto—"Well, I still have the subject."

Ditto—"So have I. Shake!"



Neilson's
Chocolate Bars

are the handy candy. Easy to buy, easy to carry, easy to eat. Biggest value for your money—a variety to please every taste.

Try one of These To-day. There are 42 Delightful Kinds of Neilson's Bars.

Insist on Neilson's

Nothing

College—"What do you say to a tramp on the campus?"

Macite—"I never speak to them."

* * *

There is a very gratifying satisfaction in landing on the mosquito which has just stung you.

* * *

Mac—"Does she know Bill well enough to speak to?"

Donald—"No, only to talk about."

* * *

Prof. Le Drew—"Now, can any of you gentlemen tell me what a trust company is?"

McConnell—"Yes, sir. It's a bunch of men surrounded by other people's money."

* * *

Brotherly Love

Webber—"What's the best way to teach a girl to swim?"

Heggie—"Well, you wanta take her gently down to the water, put your arm round her waist, and—"

Webber—"Oh, cut it out. It's my sister."

Heggie—"Oh, push her off the dock."

* * *

An 'Owler

During the last term, one of the First Year just fresh out from the Old Country was walking down to the city with a friend, when they suddenly heard an owl "W-h-oo! W-h-o!" The Englishman asked: "What is that?"

"Oh, that's an owl," answered his friend, casually.

"Well," stormed the indignant Englishman, "I know it's an 'owl. But what the 'ell is it that's 'owling?"

* * *

Prof. Millen—"What lesson do we learn from the honey bee?

Apiculture Option — "Not to get stung!"

A Trip to Rondeau and Pelee

(Continued from page 428)

Somewhat nearer the tip of the Peninsula we found a single plant, twisted and weather-beaten, that looked strangely familiar to me; it had a few blossoms still on it, two-lipped with purplish marks, like those of a Figwort. It proved to be the Water Willow—not Decodon or Swamp Loose Strife, but Dianthera—like the Bladderworts, the Catalpa, and the Broomrape, a close ally of the Figworts or Scrophulariaceae. We hazarded the guess that it had sown itself from some colony at a distance, perhaps up the east shore of the spit, and so it proved; we found large patches of it flowering profusely in the margin of a lagoon two or three miles away. Like nearly all blossoms with irregular or two-lipped corollas, it makes strong and immediate appeal to the sense of beauty. I had found it two years before in the Spring Lake region of N. Y. State, while on an orchid-hunting expedition.

Our way home brought us past the edge of a wood beset with flowering shrubs of late elder and dogwood. It was about noon and the sun was exceedingly hot. The blossoms were attracting crowds of pollen-gatherers, and among them very conspicuously appeared several species of Lepturid Longhorns. These flowering thickets, especially up the east shore just back of the sand, proved the best and almost the only collecting ground we discovered at Pelee. And a curious feature of it was that Longhorns were found resorting in great numbers to dogwood clumps a long distance from standing timber, at least a mile; this was a most unusual thing, almost unique, in my experience.

Leptura rubrica was very abundant; so was Typocerus acuticanda; this insect is probably only a variety of Typocerus velutinus, but it was apparently here in the nature of a local race, for we never found a single specimen of the normal form in nearly forty captures that we made. One of the Strangalias was also abundant, S. Uteicornis, so called from its yellow antenae; both Professor Baker and I captured two or three specimens of Bellamira scalaris here; they were all males, and evidently we were too early for the full emergence: a season or two before, Mr. Bigelow had found them abundant (mostly females) in early July. On the foliage of these shrubberies we took occasional specimens of Oberea, as many as three species being recorded.

Considering that we had only two or three days' collecting at each of these two points, Rondeau and Pelee, I would say that the district was very rich. Had we been able to find satisfactory blossom haunts at Rondeau and windfalls at Pelee, we should certainly have added many more to our list of fifty species of Longhorns; and if a collector were to stay in the neighborhood from the middle of May till the end of July, he would of a certainty secure something like a hundred species, and make many interesting records of dates, food-plants and habits. Mr. Bigelow, for instance, in early July, captured two species of Eupogonius, several Acanthoderes, Liopus and Lepturges that we never saw; and there are species of Goes and several other genera of the Lamiinids that have been recorded from this southerly region of Ontario.

I greatly hope to pay another visit to Rondeau and Pelee, if only to renew acquaintance with old friends that laugh to the summer sun in gayness of petal and scale and plume, of flight and song, and in their beauty of colour and form and sound and motion reveal the very life and soul of Nature.

SMOKE

in ½ lb. tins

and 15¢ pkts.

OLD CHUM

The Tobacco of Quality

INVESTMENT

THE gifts you give can be real investments and not mere outlays.

Such worth-while things as fine jewellery and substantial sterling silver have a staple intrinsic value that endures for all times.

They will still be used and admired long after articles of less merit have passed away.

RYRIE BROS. Limited

134-136-138 Yonge Street, TORONTO

Farm Conveniences Exhibit

(Continued from page 429)

it was inspected with considerable interest by several members of the staff. The accompanying photograph was taken of the truck while it was at the College. The first itinerary will be through Western Ontario, and later a similar one will be arranged for through Eastern Ontario.

The Department of Physics is pleased to see so much prominence given to this phase of extension work, as it has been labouring earnestly for years in the class-room and out of the class-room to popularize this important work. We shall watch the results of the campaign with great interest, and we feel that the demonstrations all over the Province will have a telling influence for better homes in the rural districts.

We understand that it is the intention of the Provincial Moving Picture Bureau to secure pictures of this outfit at some of the demonstrations this summer in order to give this work further publicity.

My Legacy

The little tree I planted out
And often muse upon,
May be alive to grow and thrive
And out into the sunlight strive,
When I am dead and gone.

So it shall be my legacy
To toilers in the sun,
So sweet its shade, each man and maid
May be induced to take a spade
And plant another one.

—*Ethelwyn Wetherald.*

Fifty Phonograph Records

The English Department has frequent enquiries for a list of phonograph records, which can be recommended. Such a list is difficult to make. People's tastes differ and it is difficult to suit everybody. Some selections, while suitable for a class room or concert hall, are not suitable for a private home. A Victor record of a certain selection may be good, while an Edison record of the same subject may be poor—and vice versa. Out of many thousands of records it is difficult for one person to select say fifty that are better than another fifty which some one else might choose. Whatever selection is made, it would be possible to make another and different selection, which some people might prefer. The following, then, is merely a suggested list of records which most people enjoy, and which may serve as a basis for further selection:

1. O Holy Night—Adam (Christmas).
2. Silent Night—Gruber (Christmas).
3. Ave Maria—Bach-Gounod.
4. Ave Maria—Schubert.
5. Cavatina—Joseph Raff.
6. Serenade—Schubert.
7. "Sweet Spirit, Hear My Prayer"—Wallace.
8. William Tell Overture—Rossini.
9. A Dream—Bartlett.
10. Toreador Song from "Carmen"—Bizet.
11. O Sole Mio (Italian Folk Song)—Di Capua.
12. Hallelujah Chorus—Handel.
13. Poet and Peasant Overture—Von Suppe.
14. Introduction to Act III., "Lohengrin"—Wagner.
15. Berceuse from "Jocelyn"—Godard.
16. "Praise Ye" from "Attila"—Verdi.
17. Serenade—Moskowski.
18. "Anvil Chorus" from "Il Trovatore"—Verdi.
19. Nutcracker Suite—Tschaikowsky.
20. The Brook—Tennyson-Dolores.
21. Rigoletto Selections—Verdi.
22. Fest Overture—Leutner.
23. "Home to Our Mountains"—Verdi.
24. Quanto Io T'Amo—Satta.
25. Humoresque—Dvorak.
26. Oberon Overture—Weber.
27. Listen to the Mocking Bird—Winner.
28. Drink to Me Only With Thine Eyes—Old English Air.
29. Ballet Music from "William Tell"—Rossini.
30. Sextette from "Lucia"—Donizetti.
31. Miserere from "Il Trovatore"—Verdi.
32. La Capinera—Benedict.
33. Largo from "The New World Symphony"—Dvorak.
34. Air for G String—Bach.
35. Coronation March—Meyerbeer.
36. Spring Song—Mendelssohn.
37. Melody in F—Rubinstein.
38. Hindoo Chant from "Sadko"—Rimsky-Korsakow.
39. Voci di Primavera—Strauss.
40. Tannhauser March—Wagner.
41. Minuet in G—Beethoven.
42. Intermezzo from "Cavalleria Rusticana"—Mascagni.
43. Melodie—Tschaikowsky.
44. Barcarolle from "Tales of Hoffman"—Offenbach.
45. Souvenir—Drdla.
46. Meditation from "Thais"—Massenet.
47. Come Where My Love Lies Dreaming—Foster.
48. Nocturne in E Flat—Chopin.
49. Serenade from "Les Millions d'Arlequin"—Drigo.
50. "If With All Your Hearts" from "Elijah"—Mendelssohn.

Dependable DELCO-LIGHT

Should be Serving You

It is impossible for us to list **all** the advantages Delco-Light will bring to your home, for new uses are constantly being found for it about the farm.

The few given here, however, prove beyond question that Delco-Light is the greatest time saver, money-maker and all-round convenience you can obtain. Built to General Motors standards in the Delco-Light plant at Toronto, economical of fuel and requiring little attention, Delco-Light soon pays for itself and gives you the great boon of electric-lighted buildings **free.**

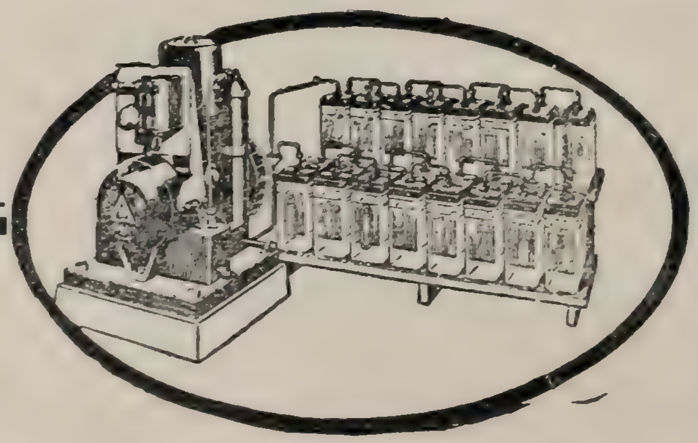
And because of the low prices you can now get your Delco-Light plant easier than ever before. You can buy it on a small payment down—you can pay for it on the easiest of terms.

Let your nearest distributor tell you how little it really costs to install a Delco-Light plant in your home—or write to us for interesting instructive literature.

Delco-Light Co. of Canada, Limited,
Toronto, Ontario.

ELECTRICAL SYSTEMS LTD.
173 King St. East, Toronto

Delco-Light is made in twenty-five styles and sizes—one to meet your needs exactly.



Why You Should Have Delco-Light

1. It provides brilliant, safe light for farm and home.
2. It pumps the water.
3. It turns the churn.
4. It runs the separator.
5. It turns the grindstone.
6. It runs the sewing machine.
7. It increases egg production.
8. It operates the milking machine.
9. It operates the washing machine.
10. It operates the vacuum cleaner.
11. It runs the fanning mill.
12. It keeps the children contented on the farm.
13. It makes the hired help better satisfied.
14. It is excellent insurance and protection against fire.
15. It heats the electric flat iron
16. It costs less to operate than coal oil lamps and lanterns.
17. It provides greater safety, especially for the children.
18. It provides power for clipping horses and shearing sheep.
19. It makes it possible to do the chores more rapidly with greater safety and with a saving of time and consequently money.
20. It has been tested and proved practical and economical for your use in over 180,000 homes.
21. It is made by the Delco-Light Company of Canada and is a product of the General Motors Corporation which guarantees the highest excellence of manufacture and service.

Give Your Hens A Square Deal, Feed

PIONEER
POULTRY
FOODS

Chick Food,
Growing Mash,
Scratch Food,

More Eggs
and
Better Birds,

Laying Mash
Fattening Mash,
Pigeon Food,

WESTERN CANADA FLOUR MILLS COMPANY, LIMITED
TORONTO, ONT.

Why Young Men Leave College

Brown—"What! Home again, Jim? I thought you were attending college?"

Ex-Freshman—"Well, I did go for a while, but I found that dad's hired man is making more money than a professor, so I came home."

* * *

The Real Question

Wife—'Do you know that you haven't kissed me for six weeks?"

Prof. (who is absent-minded)—"Good heavens, who have I been kissing then?"
—Wisconsin Octopus.

* * *

Harsh Criticism

Alice, for the first time, saw a cat carrying her kitten by the nape of its neck.

"You ain't fit to be a mother," she cried, scathingly. "You ain't hardly fit to be a father!"—Youth's Companion.

Hard to Find

Graham (reading newspaper)—"What's a drydock?"

Braund—"A doctor who won't give out prescriptions."

* * *

Every Man to His Taste

WE WANT YOUR
EGGS
AND WANT THEM BAD
PORTER & YOUNG

—Display Ad. in The Le Roy (Minn.) Independent.

* * *

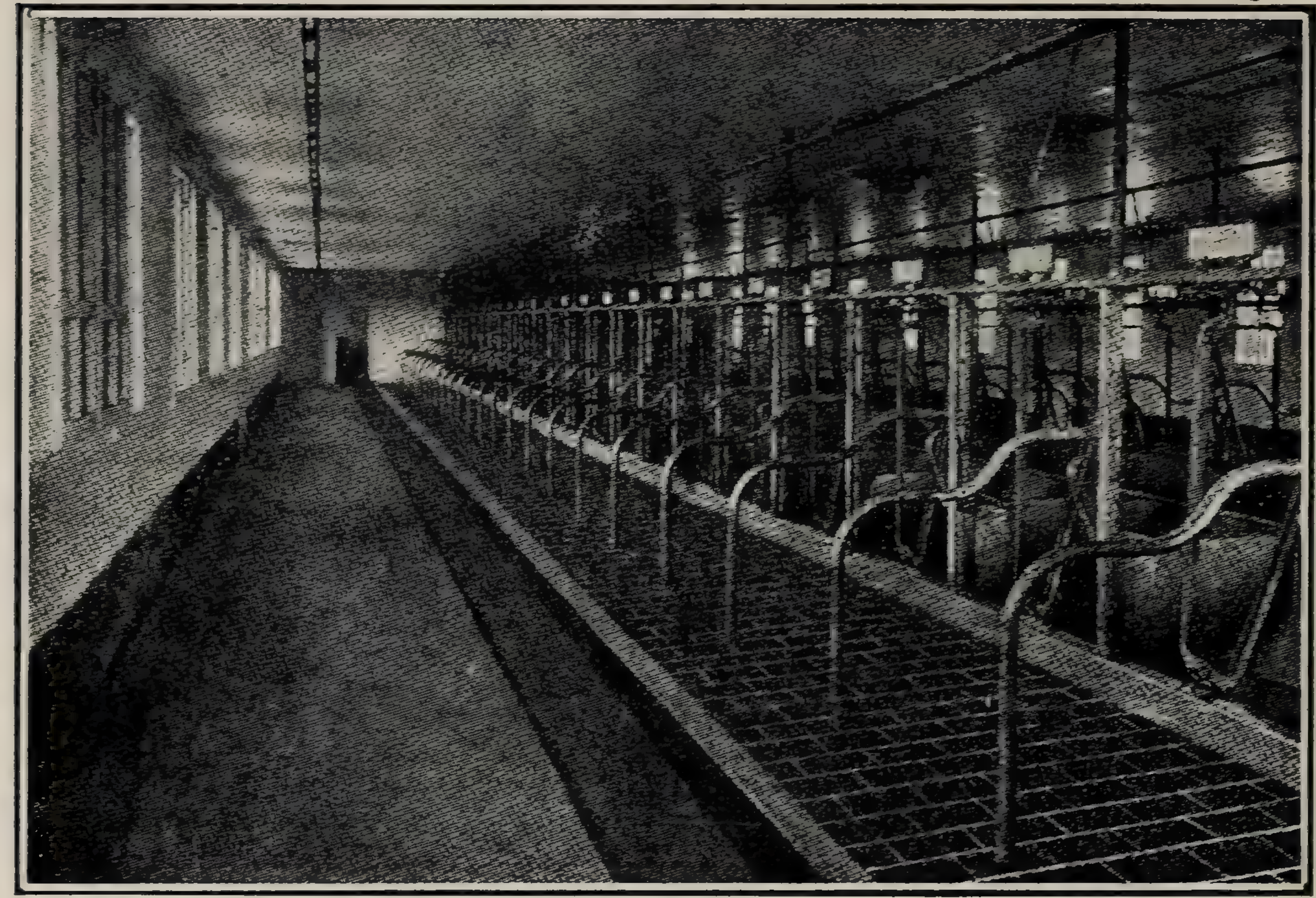
Tasty

Joe—"Say, boy, somethin' funny happened to me last night."

Jack C.—"That so?"

Joe—"Yes, last night I dreamed I was eatin' shredded wheat; an' w'en I woke up, de half my mattress was gone."

THE COW STALL FLOOR PROBLEM



Is solved for all time by use of ***Cork Paving Brick.*** These bricks Possess all the good features of both wood and cement, with none of their faults. Cork brick are warm and resilient, non-slippery, perfectly sanitary and remarkable for durability in service.

Cork Brick Floors

Are used by hundreds of prominent stockholders in the United States and Canada, and also by many Agricultural Colleges and Government Experimental Stations.

ARMSTRONG CORK & INSULATION CO., Limited

McGill Bldg., MONTREAL, QUEBEC

The Ryerson Press
Founded 1829

The O. A. C.
in a new novel—

YOU will want to see how the College, "Mac. Hall," the Rink and other familiar institutions are featured in

GOD'S GREEN COUNTRY

By Ethel M. Chapman

See too, how Miss Chapman sets to work in her "Green Country" the very principles you are working with daily. The author is a graduate of the farm as well as of Macdonald Hall and knows what she writes about.

PRICE, $2.00

The Ryerson Press
Publishers - - Toronto

THE DAYLIGHT PRINT SHOP

THE HOME OF GOOD PRINTING.
Catalogues, Advertising Booklets and Circulars, Commercial and Society Stationery.

We Guarantee Satisfaction

HAYDEN PRESS, Limited
(Formerly Advertiser Job Printing Co., Ltd.)
Corner York and Wellington Sts.
London Phones 247-248 Ontario

PREVENTABLE LOSSES

Many dollars are lost annually to ice cream manufacturers not through carelessness, but through lack of knowledge concerning the effect of the right cleanliness in protecting the quality of their product and the consequent gain in profits.

Such cleanliness is produced in ice cream plants the country over by the use of

Wyandotte
Dairyman's
Cleaner and Cleanser

and so strongly endorsed by them because it:

—Insures the complete removal of all dirt and objectionable matter from equipment and utensils.
—Rinses so easily and freely that even the cleaner itself is entirely removed, leaving the surface sweet and sanitary.
—Protects the natural surface of that which it cleans and also is harmless to the hands of the users.
—Deodorizes all stale and sour smells and odors in the plant.
—Produces these results on a basis which shows a gain in profits on the investment.

Ask your supply man.
It cleans clean.

Indian in Circle
in every package

THE J. B. FORD CO., Sole Manufacturers
Wyandotte, Mich.

A Stomach's Diary

(Continued from page 440)

nog heavy with chocolate. Could have managed it all right if it hadn't been so unnaturally cold, but that made it terribly difficult to deal with.

"1.10 P.M.—More ice-water.

"1.40 P.M.—Was mistaken about the peanuts; she found another handful in the bottom of her vanity bag, and now I am getting them again.

"2.05 P.M.—More ice-water.

"2.10 P.M.—She has been lifting some heavy books and as usual used my muscles, instead of her arm muscles. You see, she's never had any proper physical education—soft, flabby, slouchy sort. Tired me almost as much as a six-course dinner.

"3.20 P.M.—Furtive fellow has brought us a box of caramels. Just heard her say, 'Oh, dear! I don't feel a bit well. The milk in that egg-nog must have been sour.'

"6.30 P.M.—We played a set of tennis before dinner and here I am all tired out and a lot of work to do.

"6.50 P.M.—We were invited by a sissy sport with a belt on his coat to have a soda before going home. Had a lemon phosphate and then had to run for a car.

"7.00 P.M.—Fried 'taters, cucumbers, veal cutlets, catsup, cookies and canned blue berries. What do you know about that?

"7.45 P.M.—We are strolling down to the corner with a knock-kneed guy in a sport shirt and white pants for a pineapple walnut college ice.

"8.20 P.M.—Got home and found somebody had made some iced-tea. She drank two glasses. I tried hard to keep the tea and the college ice separated, but they mixed in spite of me. I go on strike.

"8.30 P.M.—I have sent back the college ice and the iced-tea.

"8.40 P.M.—Returned the blueberries.

"8.45 P.M.—And the peanuts.

"9.00 P.M.—The devil to pay—can't find the doctor.

"9.17 P.M.—Doctor found at the movies. Mother thinks it's a weak stomach she inherited from her father. Knock-knee suggests it's the beastly weather—the big boob!

"9.45 P.M.—Doctor says it is from a bilious temperament. Good-night!"
—The American Journal of Public Health.

The Whole Life Plan

RATES PER $1,000	
Age	Premium
20	$13.55
25	15.50
30	18.00
35	21.20
40	25.35
45	30.70
50	37.80
55	47.15

DESCRIPTION

(1) Premiums constant at rates quoted. Policy payable at death.

(2) **For Accidental Death** amount payable is doubled.

(3) If Total and Permanent Disability occurs, premiums cease and the Company pays $20 a month per $1,000 of insurance. The charge for inclusion of (2) and (3) is small.

SIGN..
Age Name

....and mail to
Address

The Ontario Equitable Life and Accident Insurance Company

Head Office, - Waterloo, Ont.

J. W. MATHER, District Manager, 23 Wyndham St., Guelph.

High School Boards and Boards of Education

Are Authorized by Law to Establish

INDUSTRIAL, TECHNICAL

and

ART SCHOOLS

WITH THE APPROVAL OF THE MINISTER OF EDUCATION

Day and Evening Classes may be conducted in accordance with the regulations issued by the Department of Education.

Theoretical and Practical Instruction is given in various trades. The schools and classes are under the direction of **an Advisory Committee.**
Application for attendance should be made to the Principal of the school.

Commercial Subjects, Manual Training, Household Science and Agriculture and Horticulture are provided for in the Courses of Study in Public, Separate, Continuation and High Schools, Collegiate Institutes, Vocational Schools and Departments.

Copies of the Regulations issued by the Minister of Education may be obtained from the Deputy Minister, Parliament Buildings, Toronto.
Toronto, December, 1921.

SOME MEN ARE
ALWAYS BORROWING

Although they sometimes have larger incomes some men are always borrowing.

The confirmed borrower is a self-convicted failure, a grumbling and unreliable person who usually reaches old age dependent on others or still working, struggling and borrowing for a living—and finally dies under a load of debt.

On the other hand, the lender is the man who spends his money freely but with care, who saves something each pay day and goes through life happy and contented, with money always at his disposal to grasp each opportunity. He saves before he spends and thus embraces prosperity for himself and his family.

The Royal Bank of Canada

INCORPORATED 1869

College Men As Farmers

Every now and then some one draws his bow on the agricultural colleges with the charge that they encourage and fit boys to leave the farm rather than to fit them for a fuller and more prosperous farm life than they would otherwise have. Statistics compiled by the animal husbandry department of the Iowa State College at Ames show that 93.02 per cent. of the graduates from that department are now in some sort of agricultural occupation. A total of 599 animal husbandry graduates is recorded, of which the college received reports from 531. Nearly 60 per cent. of these men are farming and over 33 per cent. are now in other agricultural occupations. Less than seven per cent. of the animal husbandry graduates are engaged in work which is not allied to that for which they were educated. Would a better record be found if a similar study were made of graduates in law, medicine or engineering?

—*Canadian Ayrshire Review.*

"Where the cow is, there is Arcadia; so far as her influence prevails, there is contentment, humility and sweet, homely life."

—*John Burroughs.*

Canadians are apt to think that their forests are illimitable and their supply of wood inexhaustible. This is not so. Fires and insects are depleting the reserves of forested land at an alarming rate and it has become a pressing national duty to conserve the forest resources and create new ones by reforestation.

Hand Picked Clothes for College Men

Suits and Overcoats with just a little more swagger than regular business clothes, yet with the dignity that good taste demands.

Loosely draped, high chested effects are what the younger set demands. You'll find such clothing here in a variety of styles that you're sure to like.

COME IN AND PAY US A VISIT

AT

The Main Store—Lower Wyndham Street, or
The Branch Store—Upper Wyndham Street

Clothing or Furnishings—Your Own
Particular Need can be met here—
and at Your Own Particular Price.

D. E. Macdonald & Bros.

LIMITED

"STYLE HEAD-QUARTERS"—WHERE SOCIETY BRAND CLOTHES ARE SOLD.

"Ontario Fertilizers" for All Crops

The first choice of Successful Farmers because
They increase yields of grain and produce; better qualities of
vegetables and fruit.

"HARAB" POULTRY FEEDS

include
Beef Scrap, Meat Bone Scrap, Poultry Bone, Poultry Bone Meal, Blood Meal, Oyster Shell, Poultry Grit, etc.

"HARAB" DIGESTIVE TANKAGE

60% Protein for feeding hogs.

Write for prices and full particulars on above lines.

ONTARIO FERTILIZERS, LIMITED

WEST TORONTO **CANADA.**

The percentage of men entering agricultural occupations from all of these institutions (agricultural colleges) is large and even beyond what one might expect. Their influence upon the agriculture of the country is now being felt in higher standards of production, in the great co-operative farmers' movements of to-day, and the increasing stress on a higher plane of living on the farm and in the farm community. In the words of Albert R. Mann, Dean of Agriculture at Cornell: "The most rapid advance in Agriculture in the interest of all the people will come from the work of these highly trained men and women. They ultimately bring to the state and nation the highest return from the investment of public money made in them."

—*The Washington Industrialist.*

NITRATE OF SODA

FURNISHES NITROGEN AS A NITRATE

The only form in which plants absorb it.

In the light of modern experience The Secret of its Superiority is revealed.

Have you revised your knowledge of Plant Nutrition Problems recently?

Let us send you literature on the subject.

THE CHILEAN NITRATE COMMITTEE
(B. Leslie Emslie, Director)
1602 ROYAL BANK BUILDING
TORONTO, ONT.